PROGRAMMATIC SECTION 4(F) EVALUATION FOR THE WADE CREEK RECREATIONAL SEGMENT OF THE FORTYMILE WILD & SCENIC RIVER WITHDRAWAL

Taylor Highway
MP 64.5 to Canadian Border
PROJECT NO. STP-0785 (11)/66446

Prepared By:

Alaska Department of Transportation & Public Facilities

Prepared For:

Federal Highway Administration

May 2004

Programmatic Section 4(f) for the Use of Minor Amounts of Land from Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges

Alaska Department of Transportation and Public Facilities
May 19, 2004

Project Name: Taylor Highway Milepost 64.5 to the Alaska/Canada Border
Project Number: STP-0785(11)/66446

The Federal Highway Administration (FHWA) agreed on February 3, 2004 that Section 4(f) applies to the project and that the project is designed to improve the operational characteristics, safety, and/or physical condition of the existing facilities on essentially the same alignment. The proposed project would rehabilitate the Taylor Highway from milepost (MP) 64.5 to the Alaska/Canadian Border. The entire project is approximately 44 miles long. The proposed project does not require the preparation of an Environmental Impact Statement.

Project Description

The Alaska Department of Transportation and Public Facilities (ADOT&PF), in conjunction with FHWA, is proposing to improve the Taylor Highway from MP 64.5 to the Alaska/Canada Border (Figure 1). The scope of the project consists of rehabilitation, restoration, and resurfacing of the existing roadway on the same or slightly modified alignment.

The proposed project would 1) resurface, restore, and rehabilitate the existing highway from the Mosquito Fork Bridge to the Alaska/Canada border; 2) replace the existing one lane bridge over Chicken Creek with a single span, two lane bridge; 3) provide enhancements for recreation; and 4) provide reliable access to the Wade Creek Recreational Area.

The present highway alignment would be maintained except for minor realignments to reduce curvature on corners and shifting the highway away from the Wade Creek floodplain. The highway would be realigned at multiple locations for a total of approximately 3.5 miles (Figures 3-12). The proposed highway realignments at corners average 0 to 50 feet from the existing highway centerline. Along Wade Creek, the maximum shift is 100 feet from the current centerline. The road would be improved by widening to 28 feet with two 10-foot lanes and 4-foot shoulders, and surfacing with asphalt (Figure 13). Drainage would be improved to convey water away from the road by ditching parallel to the road and

installing cross-drainage under the road. The posted speed would be 40 miles per hour from MP 64.5 to Walker Fork (MP 82) and 50 miles per hour from Walker Fork to the Alaska/Canada border.

A wayside would be constructed at Walker Fork and located on the southeast side of the road with outhouses, interpretive signing, and picnic tables, as indicated on Figures 3 and 14. Scenic turnouts are planned where the new road will accommodate using the old road for turnouts at MP 77 on the east side of the road and MP 78 on the northwest side of the road (Figure 15). A trailhead parking area is planned for the Mosquito Fork Dredge Hiking Trail (MP 68) on the south side of the highway within ADOT&PF right-of-way. The parking area will have no facilities and will not impact the current trailhead. Highway signing will also be installed along the entire project corridor, including milepost markers and standard highway signs for direction and safety information.

The current one lane bridge over Chicken Creek will be replaced by a two-lane, single span bridge. The new bridge location will be the same as the current bridge. A temporary crossing will be installed during construction of the new bridge and removed when the new bridge is operational. Bridge approach railing and bridge deck railing will be installed on the South Fork and Walker Fork bridges. In addition, the South Fork Bridge piers require work to repair concrete spalling. The pier work will require the use of partial wooden coffer dams which will be pumped out to allow workers to fix the piers. No heavy equipment will be used in the river.

Material for road construction will be obtained from road cuts/unclassified excavation, tailings from Wade Creek and two permitted material sites (Figures 15 and 16). Any additional material from excavations will be used as slope flattening material in non-wetland areas within the ADOT&PF ROW. Material disposal sites will be identifed by ADOT&PF during the final design or by the construction contractor.

Additional ROW easements proposed by ADOT&PF in the Wade Creek Wild and Scenic River Withdrawal would be required at ten locations for a total area of 3.6 acres (Figures 3-12). Temporary construction access would be required on 1.43 acres in the Withdrawal to construct the Walker Fork Wayside. BLM would maintain the wayside after construction. Table 1 provides a summary of each proposed Section 4(f) impact. A detailed description of each site is provided following Table 1.

Table 1

Proposed Section 4(f) Land Impacts

Letter Designation[a]	Location (MP)	Additional ROW (acres)	Type of Section 4(f) Impact	Reason for Section 4(f) take
A	83.2	0.23	Acquire ROW Easement	Centerline of road will be moved up to 67 feet to the west to avoid a bend in Wade Creek that washes out the existing road.
B	83.7	0.11	Acquire ROW Easement	Centerline of road will be moved up to 63 feet to the west to avoid the road being washed out by Wade Creek.
C	84.2	0.41	Acquire ROW Easement	Centerline of road will be moved up to 102 feet to the southwest to avoid a bend in Wade Creek that washes out the existing road.
D	85.4	0.17	Acquire ROW Easement	Centerline of road will be moved up to 66 feet to the west to avoid the road being washed out by Wade Creek.
E	86.2	0.20	Acquire ROW Easement	The road will be widened to the inside of the curve to avoid filling into Wade Creek on the south side. Cut catch point on steep hillside on north side occurs outside of the ROW limit. The centerline of the road will be moved up to six feet to the north.
F	86.7	1.73	Acquire ROW Easement	The road will be widened to the outside of the curve to avoid filling into Wade Creek on the east side. Cut catch point on steep hillside on west side occurs outside of the ROW limit. The centerline of the road would be moved up to 17 feet to the east.
G	86.9	0.43	Acquire ROW Easement	Centerline of road will be moved 36 feet to the north to pull roadway away from erosion area caused by Wade Creek.
H	87.8	0.09	Acquire ROW Easement	Centerline of road will be moved a maximum of 81 feet to the north to pull roadway away from erosion area caused by Wade Creek.
I	89.1	0.11	Acquire ROW Easement	Centerline of road will be moved a maximum of 81 feet to the north to pull roadway away from erosion area caused by Wade Creek and create a larger radius curve.
J	91	0.12	Acquire ROW Easement	Centerline of road will be moved 19 feet to the southeast to pull roadway away from erosion area caused by Wade Creek and create a larger radius curve.
Total		**3.6**		
Walker Fork Wayside	82.1	1.43	Temporary Construction Access	Construction of a wayside at Walker Fork on the southeast side of the road. BLM will own and maintain the wayside after construction.

a Letter designation corresponds to the site identifier on Figures 3 through 12.
MP – Milepost

Area A - This section of highway is directly adjacent to the active channel of Wade Creek (Figure 4). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 67 feet to the west in this area. Shifting the centerline away from Wade Creek requires an additional 0.23 acre of ROW on the west side of the existing road alignment. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area B - This section of highway is directly adjacent to the active channel of Wade Creek (Figure 4). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 63 feet to the west in this area. Shifting the centerline away from Wade Creek requires an additional 0.11 acre of ROW on the west side of the existing road alignment. The old road embankment material would be removed in its entirety to prevent erosion of this material into Wade Creek.

Area C – This section of highway is directly adjacent to the active channel of Wade Creek (Figure 5). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 102 feet to the west in this area. Shifting the centerline away from Wade Creek requires an additional 0.41 acre of ROW on the west side of the existing road alignment. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area D - This section of highway is directly adjacent to the active channel of Wade Creek (Figure 6). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 66 feet to the west and eliminate the curve in the road in this area. Shifting the centerline away from Wade Creek requires an additional 0.17 acre of ROW on the west side of the existing road alignment due to the catch slope extending outside of the current ROW. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area E – This section of road is cut into a high, steep hillside adjacent to Wade Creek (Figure 6). In order to widen the road at this location fill would have to be placed in the active channel of

Wade Creek or the hillside would need to be excavated. The preferred option, requested by BLM, would require excavation of the hillside so that Wade Creek is not impacted. The centerline of the road would be moved up to six feet to the north, which would force the excavation limits to extend outside of the current ROW. An additional 0.20 acre of ROW would be required. The existing road embankment material will be incorporated into the new road.

Area F – This section of the road is bound by Wade Creek on the east and a steep hillside on the west. Road base fill from the highway currently extends into Wade Creek and is often subject to erosion because it is located on an outside bend of the creek (Figure 7). ADOT&PF is proposing to move the road away from the creek to reduce future erosion. The centerline of the road would be moved up to 17 feet to the east which would force the excavation limits to extend outside the current ROW. An additional 1.73 acres of ROW would be required. The existing road embankment material will be incorporated into the new road.

Area G - This section of the road is bound by Wade Creek on the east and a steep hillside on the west. Road base fill from the highway currently extends down a steep hillside adjacent to Wade Creek. The centerline of the road would be moved up to 36 feet to the east eliminating the curve and thereby moving the road away from Wade Creek (Figure 7). By moving the road away from Wade Creek the hillside would need to be excavated to accommodate the new alignment. Excavation of the hillside would require an additional 0.43 acre of ROW. The existing road embankment material will be incorporated into the new road.

Area H – This section of highway is directly adjacent to the active channel of Wade Creek and road base fill extends into Wade Creek (Figure 8). The curves are proposed to be straightened and the road moved up to 81 feet away from Wade Creek to avoid future erosion of the road. The relocation away from Wade Creek will extend the ditch excavation on the northwest side of the road beyond the current ROW, requiring an additional 0.09 acre of ROW. It is not possible to design the road to meet standards and stay within the current ROW because the short distance between the two substandard curves does not allow an adequate transition zone between curves. Eliminating the curves greatly reduces the potential for erosion of the roadway and enhances the roadway geometry. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area I – This section of highway is directly adjacent to the active channel of Wade Creek on the southeast and is bound by a steep hillside on the northwest (Figure 9). Wade Creek often erodes

this section of highway. To reduce erosion problems, ADOT&PF proposes to realign the centerline a maximum of 81 feet to the northwest. To realign the road, additional ROW of 0.11 acre would be required on the northwest side of the existing alignment. The additional ROW is required because the limits of excavation on the inside of the curve would extend outside of the existing ROW. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area J – This section of road is bound by Wade Creek on the west and a steep hillside on the east (Figure 11). The existing roadway fill extends into the active channel of Wade Creek and is frequently eroded by the creek. To prevent future erosion the road is being moved away from Wade Creek. The centerline is proposed to be moved a maximum of 19 feet to the east. Moving the road to the east requires the addition of 0.12 acre of ROW. The existing road embankment material will be incorporated into the new road.

Section 4(f) Property

The proposed project would involve one park property, the Fortymile Wild and Scenic River (W&SR) – Wade Creek Recreational Withdrawal which is managed by the Bureau of Land Management (BLM).

Within the Wade Creek Recreational area, the Taylor Highway is a narrow, windy, gravel road with many steep hills and some hairpin curves. In the Wade Creek valley, the road is bound by Wade Creek on the southeast and steep hillsides to the northwest (Attachment B, Photo 1). After the road climbs out of the Wade Creek drainage the topography changes dramatically and the road traverses along the tops of tundra and shrub covered rolling hills offering spectacular scenic vistas.

The Wade Creek area is rich in mining history with remnants of mining equipment scattered through out the area. Visitors to the area have the opportunity to see historic mining camps, dredges, and various other mining equipment that has been abandoned over the years

Ownership: Department of the Interior, Bureau of Land Management

Size: The entire Fortymile W&SR corridor is approximately 392 miles long and encompasses approximately 250,000 acres. The Taylor Highway traverses the Fortymile W&SR corridor for 16.5 miles. Under the Fortymile W&SR Management Plan, only the Wade Creek Wild and Scenic River Withdrawal is officially-designated as a segment of publicly-owned "recreational"

land (DOI, 1983). The Wade Creek Withdrawal is included in the proposed project area for 10.5 miles from MP 82 to MP 92 (Figure 2). The Withdrawal is approximately 3,302 acres.

Type: Wild and Scenic River System – Recreational Segment. The Fortymile W&SR was designated as a component of the National W&SR by the Alaska National Interest Land Conservation Act (ANILCA, P.L. 96-487) of 1980. The Wade Creek segment is the only part of the Fortymile W&SR system designated as 'recreational'.

Access: The Fortymile River basin is accessible by road, air, and water. There are no rail facilities. The Alaskan Highway skirts the southern part of the region and provides access from Anchorage, Fairbanks and the Lower 48 states. Direct access from the Alaska Highway to the Fortymile basin is provided by the Taylor Highway to Eagle and the Top of the World Highway to Dawson City, Yukon Territory, Canada. Primitive roads and fire lanes lead from the Taylor Highway to various parts of the Fortymile basin but are generally impassable in summer. Air service provides access to Northway, Tanacross, Eagle, and Chicken which have improved airfields. Air access is also provided at primitive air strips and gravel bars throughout the area. BLM is mandated by its River Management Plan to manage the land within the Wade Creek Withdrawal to be "readily accessible by road or railroad." During the winter the area is accessible by snow machine or dog sled.

Function and/or available activities: The land surrounding the Fortymile W&SR is mostly undeveloped and unpopulated. There are no communities within the Fortymile management area with a population of greater than 50 people. Chicken is the largest community in the Fortymile management area with an estimated population of 24 in 2002.

According to the Fortymile River Management Plan, Wade Creek receives more visitor use than any other stream segment in the Fortymile W&SR because the highway runs along Wade Creek and the Walker Fork Campground is located at its mouth (DOI, 1983). Visitors to the Withdrawal participate in recreational activities such as camping at the Walker Fork Campground, visiting the Jack Wade Dredge, fishing in Walker Fork, hunting, wildlife viewing, and snow machining. Visitor's access to the Fortymile W&SR is by private vehicle or tour bus during the summer months and snow machine or dog sled during the winter. ADOT&PF does not maintain the road during the winter. There are few developed recreation sites in the Fortymile management area. Within the project area there are waysides at Mosquito Fork (MP 64 Taylor Highway), South Fork (MP 75 Taylor Highway), and Davis Dome (MP 11.7 Top of the

World); a hiking trail at MP 68.2 Taylor Highway; and a campground at Walker Fork (MP 82 Taylor Highway). BLM keeps records of the number of visitors participating in recreational activities in the Withdrawal and these statistics are summarized in Table 2.

Table 2

Number of Visitors to Various Places in the Wade Creek Area[a]

Location	Activity	Number of Users in 2003
Walker Fork Campground	Camping	7,015[b]
Jack Wade Dredge	Viewing historic dredge	10,515[c]
Walker Fork	Fishing	200[d]
Wade Creek	General recreational activities[e]	1,000[f]
Poker Creek Border Station	Vehicle passengers	55,580[g]

a. Source: BLM, December 2003
b. Use number is based on the number of campground registrations received by BLM.
c. Number of visitors was determined using a formula based on the total vehicles/passenger numbers at the Poker Creek border crossing.
d. Use number is based on observation and estimation.
e. Includes: camping, hiking, photography, picnicking, and fishing.
f. Use number is an estimation by BLM.
g. Number of passengers counted passing through the U.S. Canadian Border.

BLM's River Management Plan for the Fortymile W&SR contains the following description of Wade Creek: "It may be unique in the Wild and Scenic system because its course and bed are largely reflections of mining activity. A dredge, now in ruins near MP 86, operated on the creek for several years in the 1930's and 1940's, changing the course of the stream with tailing piles as it worked up the drainage." According to BLM's *Preliminary Finding (BLM) Pursuant to Section 7 of the Wild and Scenic Rivers Act for the Proposed Taylor Highway Project (MP 64 near Chicken, Alaska, north to the Canadian Border)*, Wade Creek has been moved about for decades by miners whose rights under mining laws supercede the protection provided by the Wild and Scenic Rivers Act. Federal mining claims extend the entire length of Wade Creek. Mining rights also predate the road ROW and over the years the highway has been routinely rerouted in the process of mining operations. Mining has left over 650 acres of river bottom land in unstable condition, moved approximately 1.1 million cubic yards of material, buried dozens of acre-feet of silt in former settling ponds, and created piles of tailings containing thousands of cubic yards of rock. These mining practices have created an unstable creek bed that has contributed to periodic washouts of the Taylor Highway (BLM, 2003).

Project Impacts to the Section 4(f) Site

The total Section 4(f) site is greater than 100 acres and the taking does not exceed 1% of the total acreage. The total size of the Wade Creek Withdrawal is approximately 3,302 acres. The total

amount to be acquired by the proposed project is approximately 3.6 acres (0.1 percent of the Wade Creek Withdrawal).

The proposed project is likely to result in improved water quality of Wade Creek, a more stable roadbed, and increased floodplain along Wade Creek. BLM completed a preliminary Section 7 Evaluation for the proposed project that stated "since the existing roadway adjacent to Wade Creek currently poses significant problems, due to diversions, impoundments, and increased sediment runoff whenever it rains, moving the road as far as possible away from the creek would have the greatest single reduction in impacts to the water resources" (Attachment A). In order to improve and protect the water quality of Wade Creek, ADOT&PF is minimizing the use of riprap and is moving the road away from Wade Creek where possible to create a buffer zone between the road and Wade Creek. Erosion and sedimentation levels are expected to decrease with the replacement of culverts and the creation of additional floodplain along Wade Creek. Short-term impacts during construction will include temporary increased sedimentation, but the impacts are expected to be temporary.

No anadromous fish streams exist in the project area. Arctic grayling and slimy sculpin may migrate up Wade Creek during the summer to take advantage of feeding opportunities but, Wade Creek currently has little suitable habitat to support resident fish populations (BLM, 2003). No essential fish habitat is present in the project area.

The proposed project will affect approximately 1.81 acres of black spruce wetlands located adjacent to the road. There are no high-value wetlands located in the project area. According to BLM, the ponds and marshes adjacent to the road along Wade Creek are the result of ground disturbing activities from mining activities. Many are old settling ponds or small stream diversions that collect storm runoff, but cannot drain because of tailing piles or the roadbed. Rehabilitation of the road will help restore natural drainage patterns.

On October 30, 2003 the State Historic Preservation Officer concurred that no historic properties would be affected by the proposed project, provided that any road widening would occur on the opposite side of the present highway from Jack Wade Camp and Jack Wade Dredge (Attachment B, Photo 4). The proposed project conforms to these constraints.

The project would not require land from a site purchased or improved with funds under the Land and Water Conservation Fund Act, the Federal Aid in Fish Restoration Act (Dingell-Johnson

Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act), or similar laws, or lands otherwise encumbered with a Federal interest.

Alternatives

No Build Alternative

The No Build Alternative would not correct existing roadway deficiencies such as insufficient width, deteriorated conditions, and maintenance problems (Attachment B, Photo 3). Delayed maintenance and reconstruction costs are likely to increase significantly as deteriorating conditions in problem areas compound over time.

Without additional ROW or highway improvements at Section 4(f) land areas A through D and G through J, erosion by Wade Creek would continue and the pattern of cursory, temporary repairs made each year would continue. The deteriorating highway conditions and maintenance problems would compound and increase significantly over time. The road would continue to be narrow, shoulder less, and frequent washouts would continue to be expected.

Under the No Build Alternative, primary safety hazards presented by existing highway conditions would continue. Insufficient sight distances around substandard curves would not be corrected at areas I and J, and areas E and F would continue to have insufficient roadway width.

Build Alternative that Does Not Use Section 4(f) Land

Since the Taylor Highway bisects Section 4(f) land in the Withdrawal, any proposed realignment outside the current ROW needed for safety or physical improvements would require use of Section 4(f) lands. It is not possible to avoid Section 4(f) land within the proposed project area by using roadway design or transportation system management techniques. Implementing such measures without using a minor amount of Section 4(f) land would result in the project not meeting the long-identified transportation needs.

The project included evaluation of four engineering design alternatives to avoid impacts to Section 4(f) lands. All four alternatives were determined to not meet the purpose and need of the project for the identified Section 4(f) land areas in question. The four eliminated designs are summarized below.

Design Option 1

Option 1 would leave the road in its current location with no widening or realignment, but would provide highway surfacing with high-float asphalt. The road would continue to be narrow, shoulderless, and would continue to erode. Frequent washouts could be expected to continue. Sedimentation of Wade Creek due to erosion of sideslopes and roadbed structure would continue to occur.

By surfacing the current roadway without widening or realignment the road would not benefit from safety enhancements provided by the proposed project. Restoration and improvement of the existing roadway located in the Wade Creek floodplain (Areas A-D and G-H) would not prevent future embankment erosion nor would it allow for increased stabilization of the floodplain.

Leaving the road in its current alignment and surfacing with high-float asphalt would not meet the purpose and need of the project to restore and improve the structural integrity and drainage of the existing roadway, enhance safety by improving deficient roadway geometry, and provide reliable summer access to the Wade Creek recreation area. Therefore, this option has been dropped from further consideration.

Design Option 2

This option involves steepening the slope of the road prism. The maximum slope allowed, based on the material available for road construction, is 1.5:1. The proposed road design currently incorporates side slopes of 1.5:1. Steepening the road prism to greater than 1.5:1 would create an unstable roadbed that would be subject to erosion and would be unsafe for vehicle traffic.

This alternative would not meet the purpose and need of the project to enhance safety by improving deficient roadway geometry and provide reliable summer acces to the area. This option has been dropped from further consideration.

Design Option 3

Another option is to reduce the width of the traffic lane shoulders and the corresponding clear zone, thus reducing the overall footprint area of the highway. The proposed project includes a 28-foot wide roadway with two 10-foot lanes and 4-foot shoulders on either side. With reduced road width, the road would continue to provide inadequate width for commercial and recreational vehicles to pass and there would continue to be inadequate width for vehicles to maneuver around hazards and compensate to stay on the road.

Reducing the roadway width in certain sections to avoid Section 4(f) property would cause inconsistent road conditions and would not meet the purpose and need of the project to enhance safety by improving deficient roadway geometry. This option has been dropped from further consideration.

Design Option 4

This option requires changing the verticle alignment of the road. The purpose of the project is to design for geometric integrity, which includes minimizing vertical changes and maintaining consistent grades for trucks with heavy loads. By lowering the verticle alignment of the road the road would continue to subject to flooding and erosion by Wade Creek. Frequent washouts can be expected to continue to occur. The road would continue to have inconsistent grades making driving the road difficult for commercial vehicles

Lowering the roads verticle alignment would not meet the purpose and need of the project which is to restore and improve the structural integrity and drainage of the existing roadway and provide reliable summer access to the Wade Creek recreation area. Therefore, this option has been dropped from further consideration.

Build Alternative on New Location

In order to construct a roadway free of embankment erosion and flooding from Wade Creek and free of deficient geometry without involving Section 4(f) land, a new Taylor Highway corridor outside of the Withdrawal would be necessary (Figure 2). New route alternatives would be limited to construction within the surrounding mountain range. Two alignments were considered; one that went north and west of the project area and one that went south and east of the project area. Both alternative alignments would result in substantial adverse environmental impacts and substantially increase the project cost. The alignment north and west of the Section 4(f) property would have required construction of 20 miles of road with numerous bridges. The south east alignment would require 11.5 miles of new road with several bridges. The significant level of engineering and contruction required to establish a new highway route is anticipated to be significantly more expensive and complicated than the proposed project.

In addition, establishment of new routes would result in significant environmental impacts. A new highway route would significantly reduce access by the traveling public to existing recreational facilities and cultural resources along Wade Creek. Reducing access to the Wade Creek area to the traveling public would not meet the management guidelines of the Fortymile

Wild and Scenic River Management Plan which states that the Wade Creek Area will be managed to be "readily accessible by road or railroad."

Minimization of Harm

The proposed project design includes all possible planning to minimize harm to the Section 4(f) land, provides new recreational facilities, and in several areas, provides long-term benefits for protection against erosion to improve the water quality of Wade Creek. Extensive planning and fieldwork has been conducted with BLM to ensure the road design will protect and enhance Wade Creek and its immediate environment in order to make long-lasting improvements. BLM agreed with the assessment of impacts and proposed mitigation measures on May 14, 2004 (Attachment C). Mitigation for the use of the Section 4(f) property includes moving the road away from Wade Creek where possible, minimizing the use of riprap during road construction, regrading and blending of the abandoned road bed to create additional floodplain for Wade Creek, construction of a wayside at Walker Fork, and maintenance of the existing tree buffer between the highway and the historic Jack Wade Camp.

ADOT&PF will prepare an Erosion and Sediment Control Plan to minimize the potential for sediment to reach surface waters. Temporary erosion control measures, including straw bales and/or silt fencing will be used during construction and kept in place until newly seeded plants can bind with the soil. The Contractor will prepare a SWPPP to reduce air, water, and noise construction impacts to the maximum extent practicable. This will include a Hazardous Materials Control Plan (HCMP) to address measures to prevent and respond to potential releases of hazardous material during construction. Refueling and servicing of equipment shall not be performed within 100 feet of wetlands or waterbodies with the exception of low mobility equipment being used for road construction. The HMCP will provide a detailed process for fueling this equipment within 100 feet of wetlands or waters of the U.S. (Wade Creek). Fueling and service vehicles will be equipped with adequate materials (such as sorbent pads, booms, etc) to immediately contain and commence clean-up of spilled fuels and other petroleum products.

Coordination

The environmental process originally began for a portion of the project area in 1997 for MP 82 to the Alaska/Canada Border. A draft Categorical Exclusion (CE) and Section 4(f) document were prepared by ADOT&PF and reviewed by BLM. On February 19, 1998, BLM concurred with the findings in the two reports. The CE was never finalized or approved by FHWA because it was

determined that the environmental document needed to cover proposed road improvements from MP 64.5 to the Alaska/Canada Border.

In December 1999, ADOT&PF initiated the environmental process for rehabilitation of the Taylor Highway this time from MP 64.5 to the Alaska/Canada Border. A meeting was held with BLM on December 16, 1999 to discuss project status and schedule. On September 5, 2001, ADOT&PF sent out agency scoping letters. In response to the scoping letter BLM sent a letter requesting more detailed information about the project. To answer BLM's questions ADOT&PF and BLM met on January 17, 2002 to discuss project schedule, ROW status, and Fortymile management requirements. In September 2002, the environmental services for the project were contracted to a consultant and the NEPA process was initiated with a site visit and initiation of the public and agency scoping in November 2002.

An agency meeting was scheduled for December 4, 2002 at the ADOT&PF Fairbanks office. Due to a lack of interest from the natural resource agencies the meeting was not held. Agency scoping letters were sent out on November 29, 2002 with comments requested by December 31, 2002.

Numerous meetings were held between ADOT&PF and BLM. BLM attended the public scoping meeting in Tok on December 5, 2002 and met with ADOT&PF after the meeting to discuss the project. In February 2003, the ADOT&PF project manager, design engineer, BLM hydrologist, and BLM Outdoor Recreation Planner met several times in Fairbanks to discuss the road alignment, road design, and the use of riprap along Wade Creek. During these meetings BLM requested that the road be moved as far from Wade Creek as feasible and that the use of riprap be minimized. Based on these meetings, ADOT&PF revised the road design to incorporate BLM's requests to the extent possible. On June 9, 2003 ADOT&PF, BLM, and ASCG met in Tok to discuss the proposed project. The next day (June 10) ADOT&PF and BLM participated in a site visit to discuss project details such as the location of proposed waysides, proposed bridge work, and the location and rehabilitation of material sites. The entire project corridor was driven during the site visit. Coordination with BLM has also involved many phone calls and emails with ADOT&PF and ASCG.

BLM has agreed in writing with the impact assessment and mitigation measures on May 14, 2004 and a copy of their letter can be found in Attachment C.

Certification and Approval

I certify that all applicable coordination and consultations have occurred during the development of this Section 4(f) Evaluation and that this project meets all criteria and findings required for approval under the FHWA, Programmatic Section 4(f) Evaluation approval dated December 23, 1986.

Certified by: _____ Date: 5/28/04
Regional Environmental Coordinator

Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the Fortymile Wild and Scenic River – Wade Creek Recreational Withdrawal and the proposed action includes all possible planning to minimize harm to the Fortymile Wild and Scenic River – Wade Creek Recreational Withdrawal resulting from such use.

Approved by: _____ Date: 6/2/2004
FHWA, Environmental Project Manager

Cc: Nancy Whicker, BLM
Susan Will, BLM

Attachment A

BLM Preliminary Section 7 Evaluation

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Fortymile Team
Tok Field Station
P.O. Box 309
Tok, Alaska 99780
Phone: (907) 883-5121
Fax: (907) 883-5123

Date: BETH MILLER, ASCG, Tay Hwy Project
To: 5-8-03 FAX 339-5329

From:

Mary Maggie Randy (Nancy) Kevan Kent
Jeff Heath Steve Shane

Regarding: Preliminary Sec. 7 Finding - Tay Hwy Proj.

Place x in box if Confidential ☐

Message:

Per our telephone call this morning, this is still considered a draft until signed.

Nancy Ithichm, Realty Specialist

DRAFT

May 8, 2003

Preliminary Finding (BLM) Pursuant to Section 7 of the Wild and Scenic Rivers Act For the Proposed Taylor Highway Project (MP 64 near Chicken, Alaska, north to the Canadian Border)

Proposed Action

The State of Alaska Department of Transportation and Public Facilities (ADOTPF) proposes to upgrade the portion of the Taylor Highway that parallels Wade Creek. The purpose of the project is to improve the safety of those traveling the highway, lower scheduled maintenance costs, and reduce the negative effects of flooding on the highway and the waters of the area. As of April 2003 the project has not been precisely described by design drawings. The detailed design will only be prepared following approval of the National Environmental Policy Act (NEPA) process and if funding is obtained for the project.

The following are descriptive excerpts from the scoping documents provided by ADOTPF:

"**Alignment** – *The present highway alignment will be maintained except for minor realignments to reduce curvature on corners and shifting the highway away from the Wade Creek floodplain between MP 84 and 85. The proposed highway realignments at corners average 0 to 15 meters (0 to 50 feet) from the existing highway centerline. Along Wade Creek, the maximum shift is 30 meters (0 to 100 feet) from the centerline. The road will be improved by widening the road to 28 feet with two 10-foot lanes and 4-foot shoulders and surfaced with "high float asphalt". Drainage will be improved to convey water away from the road by ditching parallel to the road and installing cross-drainage under the road.*"

"**Material and Disposal Sites** – *Material for road construction will come from road cuts/unclassified excavation and tailings from Wade Creek. There are also nine state-owned material sites available if they are needed during construction. Figures 1 and 2 show the locations of material sites. Additional unclassified excavation will be used as slope flattening in non-wetland areas. Disposal sites have not yet been identified. A Storm Water Pollution Prevention Plan and all necessary permits and clearances for material and disposal sites will be obtained prior to construction.*"

"**Impacts to Water bodies** – *Streams within the project corridor that could be temporarily affected by road rehabilitation include: Chicken Creek, Lost Chicken Creek, South Fork, Walker Fork, Wade Creek, Warner Creek, Gilliland Creek, and several unnamed tributaries to Wade Creek. The Chicken Creek bridge will be replaced with a single span bridge. In-water work will be required at the Chicken Creek bridge for replacement of the old bridge. Approach and bridge railing work will be performed on the South Fork and Walker Fork bridges. In-water work will be required at the South Fork Bridge to repair a concrete pier. Work will be conducted at and below the water line. No reclamation of the Wade Creek floodplain will occur as outlined in previous*

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project plans. An ADF&G habitat permit will be required for work in fish bearing streams including Chicken Creek and South Fork."

*"**Culverts**-Culverts will also be installed at numerous locations to maintain natural drainage patterns. All culverts will be sized and installed to maintain water flow during high-water conditions and prevent restriction of fish passage. Culvert design and installation will follow guidance outlined in the "Memorandum of Agreement – Design, Permitting and Construction of Culverts for Fish Passage" between the ADOT&PF and ADF&G"*

*"**Flood Plain Management** – There are no Federal Emergency Management Agency Flood maps for the project area. The Alaska Community Flood Hazard Information website did not have flood information for Chicken or Boundary. According to a BLM publication Water Resources of the Fortymile National Wild & Scenic River, Alaska, the Mosquito Fork is subject to flooding during moderate to high water, the South Fork is subject to flooding only during extreme high water, and the Walker Fork is subject to flooding during moderate to high water. During the site visit there was evidence of erosion from high water of the Taylor Highway along Wade Creek at approximately MP 83 and 84. The proposed project will move portions of the Taylor Highway out of the Wade Creek floodplain."*

*"**Wetlands** – There are no National Wetlands Inventory Maps available for the project area. A wetlands delineation based on aerial photography and field verification was conducted on September 10 to 13, 2002. A wetlands delineation report is currently being prepared. Preliminary information indicates that most areas with black spruce forest are considered wetlands along the Taylor Highway. Changes in the road footprint will likely result in impacts to the forested spruce wetlands. There are also scrub shrub and emergent wetlands associated with Wade and Walker Creeks along the road right of way. These wetlands have been highly disturbed by mining activities. It is likely that a Section 404 permit would be needed from the USACE for the proposed project."*

Background Information

Wade Creek is a component of the Fortymile National Wild and Scenic River (FNWSR) system, and is managed as a recreational river area. Walker Fork and South Fork are also part of the FNWSR managed as scenic river areas. The proposed upgrade of the highway will require the placement of fill and riprap that could restrict the ability of the Wade Creek channel to meander naturally within its valley. Because of this direct impact on the "free-flow" of the stream, the Bureau of Land Management as federal manager of the wild and scenic river area is required to determine whether or not the proposed action will have a "direct and adverse" impact on the values for which Wade Creek was added to the national system pursuant to Section 7 of the Wild and Scenic Rivers Act. As mentioned above, we lack detailed and final information about the project. We do not know exactly how much fill or riprap will be used or exactly where the road will be moved from its existing location, nor do we know where the existing stream lies relative

to the road. However, we do know that the project will likely result in improved water quality in Wade Creek, a more stable roadbed, and that when the roadbed is realigned, it will likely move away from the creek rather than towards it. This draft finding was prepared based on preliminary working drawings and tabular information, incomplete surveys, and discussions with DOT staff.

One interesting fact which is quite unusual for wild and scenic river areas, is that throughout the project area Wade Creek does not flow in a "natural" channel. Instead, the stream has been moved about for decades by miners whose rights under the mining laws supercede the protections provided by the Wild and Scenic Rivers Act. Miners had rights that also predated the right-of-way for the road and routinely rerouted the highway and stream in the process of mining their claims. Miners have left over 650 acres of river bottom land in unstable condition (moving approximately 1,140,000 cubic yards of material in the process), buried dozens of acre-feet of silt in former settling ponds, and created piles of tailings containing many thousands of cubic yards of rock. These practices have decreased the average depth and sinuosity of Wade Creek and increased turbidity and bedload creating a situation where the channel has been unstable since at least the early 1900's. This unstable channel led to persistent flood damage to the Walker Fork Tent Campground that was been closed as a result by BLM. The instability of the channel and floodplain has also contributed to periodic washouts of the Taylor Highway causing episodes of impaired water quality during the flood events and during reconstruction activities.

Affected Environment

Direct alteration to within-channel conditions

The proposal includes several areas where the current channel runs right along the road. In these areas, the road would be moved away from the creek. This would have the effect of moving the artificial stream bank provided by the existing road fill that would effectively widen the flood plain. While new stream channel would not be constructed during the project, it is likely that the stream would become more sinuous and that channel slope, depth and velocity would all decrease in these areas. Removal of roadway materials from the floodplain in those areas where realignment occurs would create short-term disturbance, primarily erosion and sedimentation during construction, but the additional space created within the Wade Creek floodway would help minimize long-term effects of flooding.

The improvements to channel stability conditions could be greatly enhanced if the road were moved above the floodplain and if the mining tailing piles and capped settling ponds were more fully reclaimed.

While removal of material from the floodplain would create short-term disturbance to the Wade Creek floodplain during construction, the additional space created within the floodway would help minimize effects of flooding such as erosion and sedimentation that currently impact the stream. Blending the former tailings piles to create better drainage as well as seeding to promote revegetation would be an improvement over the existing unreclaimed tailings piles scattered along the floodplain.

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Changes to water quality as a direct result of the project
Currently the natural drainage patterns are disrupted by past mining activities, the existing road, and the lack of culverts working to divert, impede, or block flow in stream channels. Blockages or diversions resulting from insufficient flow capacity can result in seasonal or permanent impoundments. Diverting stream flow can also result in increased bank or shoreline erosion and sedimentation as well as potential thermokarst where permafrost is present. Proper siting and adequate design capacity of culverts and bridges will minimize these impacts. Any short-term disturbance, primarily erosion and sedimentation during construction, would be offset by the reduction in the flood damage that occurs annually within the watershed from the current deranged drainage and inadequate culverts.

During the construction phase water quality would decrease due to soil disturbance. In the mid- to long-term, water quality should improve somewhat due to the decrease in average velocity and control of runoff through improved road design and improved culvert design and installation.

Changes to fish habitat as a direct result of the project
Walker Fork currently supports an Arctic grayling fishery. Slimy sculpin, longnose sucker and whitefish species are present as well. There are no anadromous fish migrating, spawning, or rearing in Walker Fork. Arctic grayling and slimy sculpin may migrate into Wade Creek during the summer months to take advantage of feeding opportunities in its tributaries.

The proposed activity is unlikely to have negative impacts and may benefit the fish using Walker Fork and Wade Creek. Wade Creek currently has little suitable habitat (spawning or rearing) to support a resident fish population.

If the project included moving the road out of the floodplain, and reclamation of mining impacts, the beneficial impacts would be maximized. Floodplain restoration and revegetation would create new habitat and enhance the small resident fishery.

Changes to navigability of the stream as a direct result of the project
To the best of our knowledge, Wade Creek is not suited for boating due to lack of adequate depth except during flood events. The proposal would not affect navigability during normal or flood flows.

Direct alteration to riparian and floodplain conditions
The plan and profile annotated by ADOT engineers indicates that up to approximately 3.5 miles of road at an average shift of 28 feet will require realignment along Wade Creek. Bank armoring (possibly including riprap) may be required along approximately two miles of road. Construction or other activities (such as material sites, equipment storage, and construction camp sites) that could affect the streambanks, floodplain, or remove protective shoreline vegetation might disturb up to double the area of road realignment or up to 25 acres during construction.

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The bridgework proposed by ADOT involves no surface disturbing activities in the floodplain due to the use of pier coffer dams, boating the crews to the work area, and supply lines running from the top of the bridge structure. Thus, there should be minimal impacts during construction and no impacts afterwards. Other than a short stretch of roadway near the South Fork ADOT camp where the river is currently eroding the road, no realignments are proposed within the FNW&SR corridor except at Wade Creek. The maximum shift of the road alignment estimated to be less than 150 feet from the existing centerline will definitely not be sufficient to move any existing portion of the road out of the Wade Creek floodplain. The additional space created within the floodway by shifting the road away from the creek an average of 28 feet would help minimize effects of flooding such as erosion and sedimentation that currently impact the stream whenever it rains.

ADOT does require an Erosion and Sediment Control Plan (ESCP) to ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. Stabilization practices may include: temporary and permanent seeding, mulching, geotextiles, vegetative buffer strips, protection of trees, preservation of mature vegetation, construction phasing, and other appropriate measures. The surfaces of the existing embankment slopes are coarse gravel. Temporary stabilization practices may include temporary seeding, surface roughening, construction of mulching, and construction phasing. Permanent stabilization practices consist of limited areas of permanent seeding. Structural practices that may be implemented to divert flows from exposed soils, store flows, or limit runoff and discharge of pollutants from the exposed areas of the site may include silt fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Temporary structural practices shall include straw bale barriers, silt fences, temporary shoulder berms, brush barriers, sediment traps, check dams, and temporary pipe outlet protection. The ESCP also requires that steps be taken during the construction process to control pollutants in storm water discharges that may occur after construction operations have been completed. These measures may be subject to Section 404 of the Clean Water

This project would create over 12 acres of additional floodplain adjacent to Wade Creek after construction is completed. This area would act as an additional buffer strip, separating the creek from the road. The increase in floodway width would help minimize effects of flooding such as erosion and sedimentation that currently impact the stream whenever it rains. Regrading and blending the former roadbed to create more direct drainage as well as revegetation of the newly created floodplain would be a great improvement over existing conditions.

High-value wetlands—those that provide critical aquatic habitat to fish, birds, or mammals for feeding, nesting, or habitation—are almost nonexistent within the project area. The ponds and marshes adjacent to the road along Wade Creek resulted from ground disturbance during past placer mining. Many are either old settling ponds or small stream diversions that collect storm runoff but cannot drain due to mining berms or roadbed that block the drainage. Clearing the berms, road realignment, new culverts, and

proper regrading will help restore the natural drainage pattern. Revegetation associated with the road reconstruction may eventually restore some of the seasonally flooded marshy and riparian areas adjacent to the creek.

Direct alteration to upland conditions particularly outstandingly remarkable values
The proposed action as described is unlikely to affect upland conditions significantly so long as standard stipulations to preserve historic and cultural resources are followed. Evidence of historic human activity in the area is one of the values for which the area was designated and should be protected adequately by site specific cultural reviews and standard stipulations required by the State Historic Preservation Officer.

Relationship of the project to river management goals
Most of the project involves reconstruction of the current roadway and replacement of existing culverts so impacts should be minimal using proper sediment control during construction. The bridgework proposed by ADOTPF involves no surface disturbing activities to the channel or stream banks so should have minimal impacts during construction and none afterwards. The road realignment for the Wade Creek section of the project involves a total of up to 3.5 miles of road at an average shift of 28 feet and could cause up to 25 acres of disturbance to the Wade Creek floodplain. Short-term disturbances, primarily removal of vegetation and erosion and sedimentation during construction, would occur in areas where Wade Creek is adjacent to the road. However, ADOT does require an Erosion and Sediment Control Plan to ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. After construction is completed, the additional space created by moving the road away from the creek would create over 12 acres floodplain to act as a buffer strip, separating the creek from the road. This additional space within the floodway would help minimize long-term impacts of flooding, such as erosion and sedimentation that currently impact the stream whenever it rains. The new culverts should also reduce the flood damage from the current lack of proper drainage and inadequately sized and spaced culverts. The project should improve public safety and generally improve environmental conditions in the stream and floodplain which is consistent with the BLM's wild and scenic river management mandate to protect and enhance free-flow, water quality and outstanding values of the river area. The proposed project would not avoid all impacts to the river area because of constrained funding sources for small improvements to alignment rather than wholesale relocation,. There will still be confinement of the stream particularly during floods, and there will still be impacts to water quality due to runoff from the road area and adjacent mining disturbance.

Since the existing roadway adjacent to Wade Creek currently poses significant problems, due to the diversions, impoundments, and increased sediment runoff whenever it rains, moving the road as far as possible away from the creek would have the greatest single reduction in impacts to the water resources. Clearing the berms, road realignment, new culverts, and proper regrading would help to restore the natural drainage pattern. Revegetation associated with the road reconstruction may eventually restore some of the seasonally flooded marshy and riparian areas adjacent to the creek.

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Section 7 finding

Our preliminary finding is that the proposed project would not have a direct and adverse effect on the potentially impacted components of the Fortymile National Wild and Scenic River system. Given the fact that the project has yet to be designed in detail, we can only make a preliminary Section 7 finding based on the scoping information and informal discussions we have held with ADOTPF staff.

The above determination was analyzed by the following individuals from the Northern Field Office and the Fortymile Management Team:

Hydrologist - Jon Kostohrys
Outdoor Recreation Planner - Lon Kelly
Fisheries Biologist - Ingrid McSweeny
Fortymile Team Manager – Mary Figarelle

I concur with the preliminary finding that the proposed Taylor Highway project would not have a direct and adverse effect on the potentially impacted components of the Fortymile National Wild and Scenic River system.

_____ **Date:** _____

Robert W. Schneider, Manager

Bureau of Land Management
Northern Field Office
1150 University Avenue
Fairbanks, AK 99709-3844

AK026:NWhicker:Lands/DOTPF/Tay Hwy/Sec 7 Determination/WadeCrSec7 Prelim Doc 050803.doc

Attachment B

Photographic Log

ATTACHMENT B

PHOTOGRAPHIC LOG

Photo 1. View looking west from the Taylor Highway with Wade Creek in the background. (9/12/02).

Photo 2. Typical road bed surface, MP 91 Taylor Highway (9/11/02).

Photo 3. View looking west from MP 86.9 Taylor Highway. Typical drainage along the Wade Creek Section of road. (9/12/02).

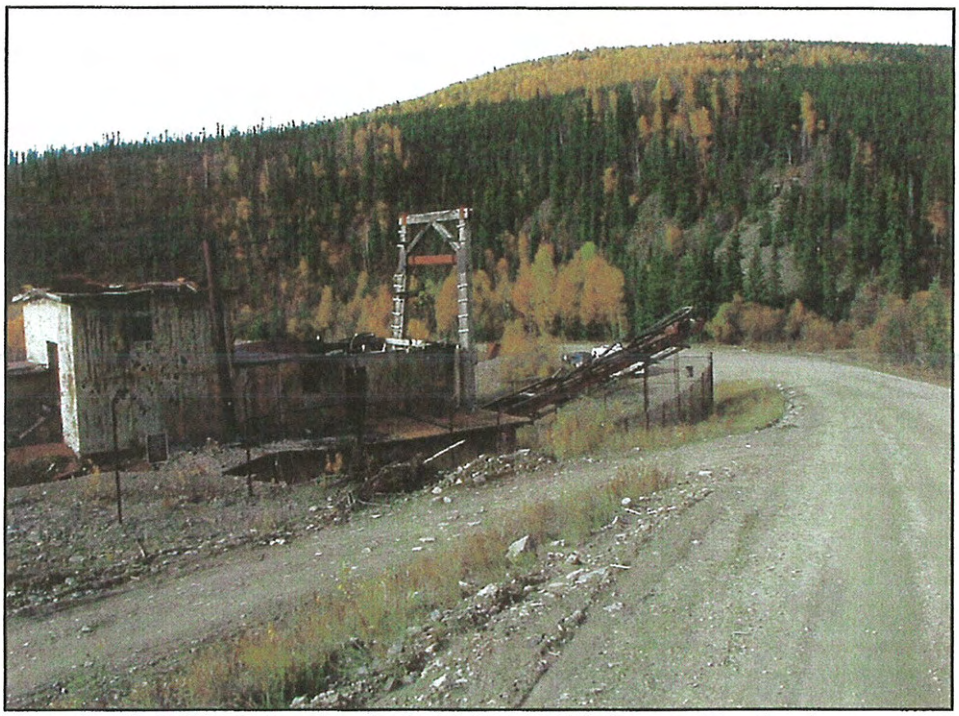

Photo 4. Jack Wade Dredge, MP 86 Taylor Highway. Dredge is proposed to be dismantled by BLM, date for dismantlement has not been set. Road will be widened away from dredge. (9/12/02).

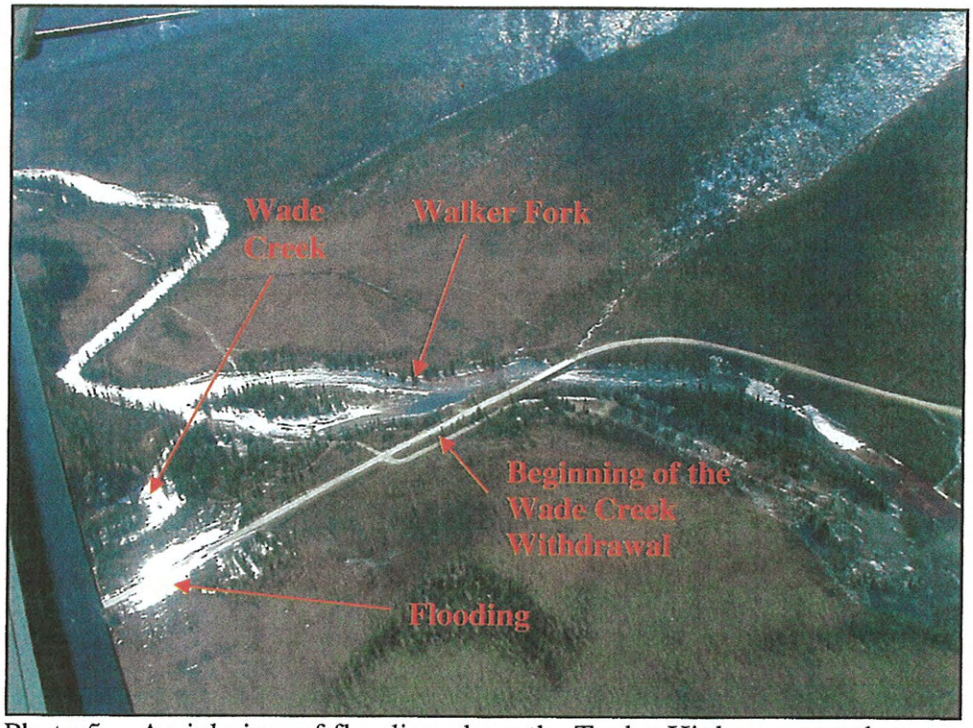

Photo 5. Aerial view of flooding along the Taylor Highway near the Walker Fork Campgroud. (4/30/03)

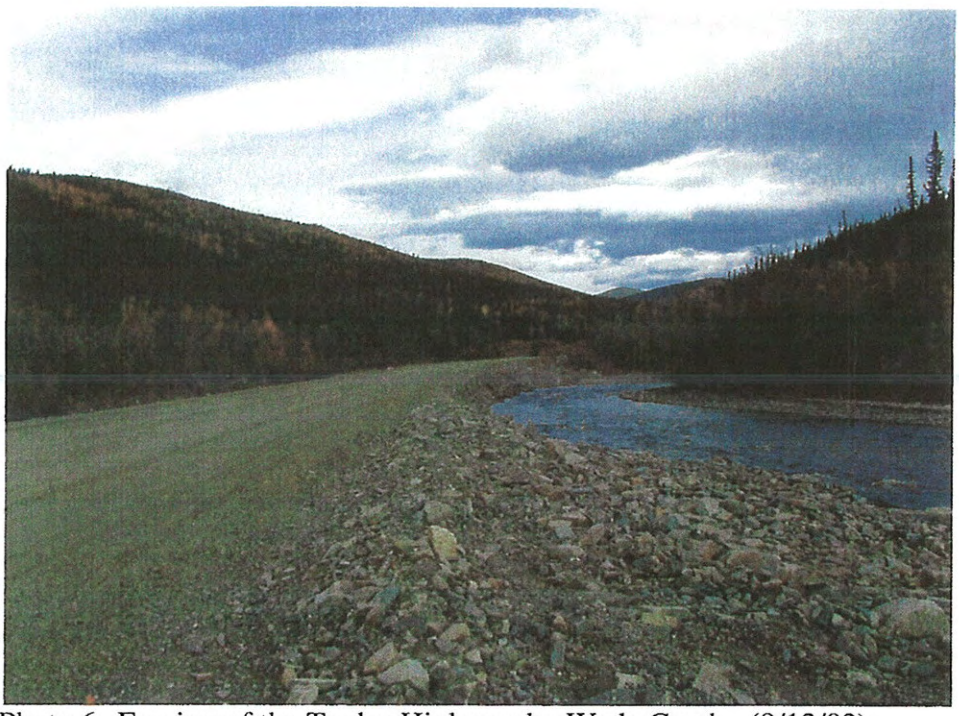

Photo 6. Erosion of the Taylor Highway by Wade Creek. (9/12/02)

Attachment C

BLM Concurrence Letter

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Northern Field Office
1150 University Avenue
Fairbanks, Alaska 99709-3844
http://www.ak.blm.gov

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
8300 (AK-020)

May 14, 2004

Tim Woster, Design Project Manager
Alaska Department of Transportation
and Public Facilities
2301 Peger Road
Fairbanks, Alaska 99709

Dear Mr. Woster:

This letter responds to your request for concurrence with the Alaska Department of Transportation and Public Facilities' (ADOTSPF) assessment of impacts and proposed mitigation for impacts associated with the Taylor Highway Mile Post (MP) 64 to Canadian Border project. Our offices have worked closely to coordinate the planning of the project where it passes through a recreational segment of the Fortymile Wild and Scenic River called Wad Creek. Members of our offices worked together through field visits, office meetings and numerous telephone calls. We concur that:

- The amount and location of the land to be used does not impair the use of the remaining recreational area in whole or in part of its intended purpose.
- The proximity impacts of the project on the remaining Section 4(f) land (Wade Creek Recreational segment of the Fortymile Wild and Scenic River withdrawal) shall not impair the use of such land for its intended purpose.
- The Bureau of Land Management (BLM) agrees with the assessment of the impacts of the proposed project and the proposed mitigation for the Section 4(f) lands per the "commitment" letter and attachments from ADOT&PF dated April 9, 2004. These attachments included the project summary, the proposed 4(f) land impacts, the proposed 4(f) land impacts detail table, figures of 4(f) properties, maps and site locations and right-of-way acquisition areas.

In addition, as part of this project, ADOT&PF is designing and constructing the Walker Fork Wayside at the request of BLM. This wayside is located within the Wade Creek Recreational segment of the Fortymile Wild and Scenic River area managed by the BLM. Construction of this wayside will be under a temporary BLM authorization.

BLM concurs that:

- The construction of the wayside is of short duration and less than the time needed for construction of the entire project.
- The temporary authorization to construct this wayside will not change the ownership or result in the retention of long-term or indefinite interests in the land for transportation purposes.
- The project will not result in any temporary or permanent adverse changes to the activities, features, or attributes which are important to the purposes or functions that qualify the resource for protection under Section 4(f).
- The construction of the wayside will impact only 1.43 acres of land which is a minor amount of land within a much larger land holding of the Fortymile National Wild and Scenic River area (approximately 250,000 acres).

If you have further questions, please contact Nancy Whicker, Realty Specialist, at the Tok Field Station, (907) 883-5121.

Sincerely,

Susan M. Will
Associate Field Manager

cc: Kim Strickland, P.E., ASCG Project Manager
Melissa Parker, ADDOT&PF Environmental Analyst
Tiff Vincent, ADOT&PF Project Designer

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

NORTHERN REGION, PRECONSTRUCTION

FRANK H. MURKOWSKI, GOVERNOR

2301 PEGER ROAD
FAIRBANKS, ALASKA 99709-5399
TELEPHONE: (907) 451-2288
TDD: (907) 451-2363
FAX: (907) 451-5126

April 9, 2004

Re: Taylor Highway MP 64.5 to the Canadian Border
Project No. 66446
Commitment Letter

Susan Will
Associate Field Manager
Bureau of Land Management
Northern Field Office
1150 University Avenue
Fairbanks, AK 99709

Dear Ms. Will:

The Alaska Department of Transportation and Public Facilities (ADOT&PF), in cooperation with the Federal Highway Administration (FHWA), is proposing to upgrade the Taylor Highway from MP 64.5 to the Alaska/Canada Border (Figure 1). This letter is to formally update Bureau of Land Management (BLM) on the progress of the environmental process for the project, and to request concurrence from BLM on the assessment of environmental impacts and proposed mitigation for those impacts. The attached project summary describes the impacts and the proposed avoidance and mitigation measures to be incorporated into project design and construction. The summary includes right-of-way acquisition figures, a table describing proposed Section 4(f) impacts, and Proposed Section 4(f) Land Impacts Detail Descriptions.

ADOT&PF is currently performing preliminary design and developing an Environmental Assessment for the project. These activities include a Section 4(f) Evaluation required by FHWA to evaluate ROW acquisition along Wade Creek, which is part of the Fortymile Wild and Scenic River system. ADOT&PF has worked closely with BLM during the preliminary design and evaluation of the project impacts, including numerous meetings, telephone calls, and field visits. ADOT&PF is requesting concurrence from BLM that:

- The amount and location of the land to be used does not impair the use of the remaining recreational area, in whole or in part, for its intended purpose.
- The proximity impacts of the project on the remaining Section 4(f) land (Wade Creek Recreational Segment of the Fortymile Wild and Scenic River System) shall not impair the use of such land for its intended purpose.
- BLM agrees with the assessment of the impacts of the proposed project on, and the proposed mitigation for, the Section 4(f) lands.

We need your concurrence on these items to complete our Section 4(f) Evaluation, which in turn is needed to complete our Environmental Assessment for the project. The preliminary Environmental Assessment is ready to submit for FHWA review, pending receipt of your concurrence.

Thank you for your consideration in this matter. I look forward to meeting with you in the near future to discuss the project. If you have any questions I can be reached via email at tim_woster@dot.state.ak.us or by phone at 451-2288.

Sincerely,

Timothy J. Woster

Tim Woster, P.E.
ADOP&PF Project Manager

TW/vzb

Enclosures: Project Summary
Figures 1-16
Table 1
Proposed Section 4(f) Land Impacts Detail Descriptions

cc: Kim Stricklan, P.E., ASCG Project Manager
Melissa Parker, ADOT&PF Environmental Analyst
Tiff Vincent, ADOT&PF Project Designer

Project Summary

Scope

The scope of the project consists of rehabilitation, restoration, and resurfacing of the existing roadway on the same or slightly modified alignment. The project is needed to restore and improve the structural integrity and drainage of the existing roadway, enhance safety by improving deficient roadway geometry, provide enhancements for recreation along the highway, and provide reliable summer access to the Wade Creek recreation area. The project area includes approximately 44 miles of highway.

Final design will likely be completed during 2004 and 2005 with project construction scheduled to begin in 2006. The project will be constructed in three phases:

- Phase 1 - Jack Wade Junction to the Border (MP 95 to MP 13 of the Top of the World Highway), 2006;
- Phase II - Mosquito Fork to Walker Fork (MP 64.5 to MP 82), 2007; and
- Phase III - Walker Fork to Jack Wade Junction (MP 82 to MP 95), 2008.

Alternatives

Alternatives being considered during development of the EA include one Build Alternative and the No-Build Alternative. The Build Alternative would 1) resurface, restore, and rehabilitate the existing highway from the Mosquito Fork Bridge to the Alaska/Canada border; 2) replace the existing one lane bridge over Chicken Creek with a single span, two lane bridge; and 3) provide enhancements for recreation. Under the No-Build Alternative no improvements would be made and the road would continue with its current level of maintenance and with only cursory repairs being made as needed.

Build Alternative

The present highway alignment would be maintained except for minor realignments to reduce curvature on corners and shifting the highway away from the Wade Creek floodplain. The highway would be realigned at multiple locations for a total of approximately 3.5 miles, most of which is within the current road ROW (Figures 2-12). The proposed highway realignments at corners average 0 to 50 feet from the existing highway centerline. Along Wade Creek, the maximum shift is 0 to 100 feet from the centerline. The road would be improved by widening to 28 feet with two 10-foot lanes and 4-foot shoulders, and surfacing with asphalt (Figure 13). Drainage would be improved to convey water away from the road by ditching parallel to the road and installing cross-drainage under the road. The posted speed would be 40 miles per hour from MP 64.5 to Walker Fork (MP 82) and 50 miles per hour from Walker Fork to the Alaska/Canada border.

A wayside will be constructed at Walker Fork and located on the southeast side of the road with outhouses, interpretive signing, and picnic tables, as indicated on Figures 3 and 14. Scenic turnouts are planned where the new road will accommodate using the old road for turnouts at MP 77.5 on the west side of the road and MP 79 on the northwest side of the road (Figure 15). A trailhead parking area is planned for the Mosquito Fork Dredge Hiking Trail (MP 68) on the

south side of the highway within ADOT&PF right-of-way. The parking area will have no facilities and will not impact the current trailhead. Highway signage will also be installed along the entire project corridor, including milepost markers and standard highway signs for direction and safety information.

The current one lane bridge over Chicken Creek will be replaced by a two-lane, single span bridge. The new bridge location will be the same as the current bridge. A temporary crossing will be installed during construction of the new bridge and removed when the new bridge is operational. Bridge approach railing and bridge deck railing will be installed on the South Fork and Walker Fork bridges. In addition, the South Fork Bridge piers require work to repair concrete spalling. The pier work will require the use of cofferdams, which will be pumped out to allow workers to fix the piers. No heavy equipment will be used in the river.

Material for road construction will be obtained from road cuts/unclassified excavation, tailings from Wade Creek and two permitted material sites (Figures 15 and 16). Any additional material from excavations will be used as slope flattening material in non-wetland areas within the ADOT&PF ROW. Material disposal sites will be identifed by ADOT&PF during the final design or by the construction contractor.

Environmental Consequences

Right-of-Way (ROW)

Right-of-way acquisition will likely be required from the owners of federal mining claims located at Lost Chicken Creek and along Wade Creek. There are no current ROW plans for the Taylor or Top of the World Highways; therefore the exact amount of ROW required for project construction is unknown at this time. Detailed design and ROW plans can not be completed by ADOT&PF until the environmental document has been signed by FHWA and ADOT&PF. A ROW application will be submitted to BLM after ADOT&PF has developed the detailed design sufficiently to accurately define ROW requirements.

After a detailed design has been completed, ADOT&PF will negotiate with the individual mining claimholders to purchase road easements across the claims. The easements will include restrictions on the mining operations, preventing mining through the road or relocation of the road. If the claimholder is not willing to negotiate the right to mine through the road, the easement restrictions will require the miner to replace the road in its original location and condition once mining is complete. In addition, the restrictions will require the miner to provide a detour constructed to the same design standards as the highway while mining is in progress. These easements will be acquired before the project is constructed.

Social Impacts

The proposed project is expected to have beneficial impacts to residents in the vicinity of the project. The improved driving conditions will likely encourage more tourists to drive the road, making it more economically feasible for residents to operate tourism-related businesses. The project will not result in the relocation of any residents or businesses.

Cultural Resources

Cultural resources along the project area were identified during a 2002 survey conducted by the Alaska Department of Natural Resources – Office of History and Archaeology. On October 30, 2003 the State Historic Preservation Officer concurred that no historic properties would be

affected by the proposed project, provided that any road widening would occur on the opposite side of the present highway from Jack Wade Camp and Jack Wade Dredge. The build alternative conforms to these constraints.

Wetlands

Approximately 20 acres of wetlands will be impacted by project construction with approximately 100,000 cubic yards of fill being discharged into wetlands. No high quality wetlands will be impacted. All affected wetlands are located adjacent to the current road.

Fish and Wildlife

No anadromous fish streams or threatened and endangered species are located in the project area. The project is not expected to have an adverse impact on fish or wildlife resources in the area. The road improvements are expected to have a beneficial impact on the water quality of the streams adjacent to the road due to less sedimentation and improved drainage.

Floodplain Impacts

The project is not expected to have an impact to the floodplain of the Walker Fork. The project will create an additional 12 acres of floodplain at various locations along Wade Creek by moving the road away from the creek and regrading the old roadbed. Riprap will likely be needed at all stream crossings along the road corridor, at various locations along Wade Creek, and at one location along South Fork. Riprap will be placed along the road embankment adjacent to Wade Creek in intervals for a total of two miles to control road bank erosion. Where possible, the road will be designed to avoid the placement of riprap in Wade Creek, as requested by the BLM. Riprap will also be used at MP 75.25 along South Fork to control road bank erosion. The replacement bridge at Chicken Creek will be designed to adequately pass the 100-year flood without damage to the surrounding area.

A preliminary Section 7 Analysis has been completed by BLM and the results of the Section 7 Analysis have been used in the development of ADOT&PF's environmental assessment. BLM's preliminary finding in the Section 7 Analysis is, "the proposed project would not have a direct and adverse effect on the potentially impacted components of the Fortymile National Wild and Scenic River System."

Water Quality

Water quality of the adjacent streams and wetlands are expected to improve after road construction. Erosion and sedimentation levels are expected to decrease with the replacement of culverts and the creation of additional floodplain along Wade Creek. Short-term impacts during construction will include increased sedimentation, but the impacts are expected to be temporary.

Section 4(f) Impacts

A Programmatic Section 4(f) Evaluation is being prepared for this project to determine whether or not there is a 'feasible and prudent alternative to the use of land' of the Wade Creek Segment of the Forty-Mile Wild and Scenic River System and to ensure that the action 'includes all possible planning to minimize harm to the property resulting from the use' (23 CFR 771.135). Ten locations within the Wade Creek Recreations Segment are proposed for improvements that would require ADOT&PF to acquire additional ROW from the Bureau of Land Management (Figures 2-12). A total of 3.6 acres would need to be acquired for the proposed project. One additional area involving 1.4 acres in the Wade Creek area would require temporary access onto

BLM land for construction of a wayside. Use of the land at these 11 locations is not expected to have an adverse impact on the remaining Wade Creek Recreational Segment. Table 1 gives a summary of each proposed Section 4(f) impact. Attached to this letter are more detailed descriptions of each proposed ROW take and descriptions as to why the take is necessary.

Permits

A U.S. Army Corps of Engineers 404/10 wetlands permit, an Alaska Department of Environmental Conservation (ADEC) 401 water quality certification, an Alaska Department of Natural Resources Title 41 Fish Habitat Permit, and a National Pollution Discharge Elimination System permit will be obtained before construction.

Material Sites

Material for project construction will come from two state-permitted material sources (Figures 15 and 16), road cuts at MP 72 and 89.1, and stockpiled mine tailings along Wade Creek at approximately MP 83. The road cut at MP 72 is located on state land and the ROW containing the road cut at MP 89.1 is proposed for acquisition by ADOT&PF. Use of mine tailings from MP 83 may require a Temporary Use Permit from BLM. Use of the mine tailings will not impact the Wild and Scenic River System because this area has been previously disturbed.

Environmental Commitments and Mitigation Measures

Environmental commitments and mitigation measures incorporated in this project include the following:

- Creation of approximately 12 acres of additional floodplain habitat along Wade Creek through realignment of the highway at various locations.
- Maintenance of a tree buffer between the highway and Jack Wade Camp.
- Improving natural drainage patterns by providing culverts for cross drainage. Currently, there is very little cross drainage due to an inadequate number of culverts and improperly sized culverts.
- Designing culverts to allow fish passage at all fish stream crossings.
- Constructing public facilities to enhance existing and new recreation areas. These include the Walker Fork Wayside, Mosquito Fork Dredge trailhead parking, and various scenic pullouts.
- ADOT&PF will prepare an Erosion and Sediment Control Plan during final design to minimize the potential for sediment to reach surface waters. Temporary erosion control measures, including straw bales and/or silt fencing will be used during construction and kept in place until newly seeded plants can bind with the soil. The Contractor will prepare a Storm Water Pollution Prevention Plan to reduce impacts to water from construction to the maximum extent practicable. This will include a hazardous materials control plan to address measures to prevent and respond to potential releases of hazardous material during construction.
- Refueling and servicing of equipment shall not be performed within 100 feet of wetlands or waterbodies.

- Best management practices will be used and maintained to prevent pollution of surface and groundwater, soil, and the atmosphere with any contaminants including hazardous or toxic materials. Any release of these materials into the environment will require immediate corrective action by the contractor in accordance with applicable State and Federal Regulations.
- If contaminated or hazardous materials are encountered during construction, all work in the vicinity of the contaminated site will be stopped until ADEC is contacted and a corrective action plan is approved by ADEC.
- Advance notice of road closures will be given to reduce construction impacts on highway users.

Table 1

Proposed Section 4(f) Land Impacts

Letter Designation[a]	Location (MP)	Additional ROW (acres)	Type of Section 4(f) Impact	Reason for Section 4(f) take
Walker Fork Wayside	82.1	1.43	Temporary Construction Access	Construction of a wayside at Walker Fork on the southeast side of the road. BLM will own and maintain the wayside after construction.
A	83.2	0.23	Acquire ROW	Centerline of road will be moved up to 67 feet to the west to avoid a bend in Wade Creek that washes out the existing road.
B	83.7	0.11	Acquire ROW	Centerline of road will be moved up to 63 feet to the west to avoid the road being washed out by Wade Creek.
C	84.2	0.41	Acquire ROW	Centerline of road will be moved up to 102 feet to the southwest to avoid a bend in Wade Creek that washes out the existing road.
D	85.4	0.17	Acquire ROW	Centerline of road will be moved up to 66 feet to the west to avoid the road being washed out by Wade Creek.
E	86.2	0.20	Acquire ROW	The road will be widened to the inside of the curve to avoid filling into Wade Creek on the south side. Cut catch point on steep hillside on north side occurs outside of the ROW limit. The centerline of the road will be moved up to six feet to the north.
F	86.7	1.73	Acquire ROW	The road will be widened to the outside of the curve to avoid filling into Wade Creek on the east side. Cut catch point on steep hillside on west side occurs outside of the ROW limit. The centerline of the road would be moved up to 17 feet to the east.
G	86.9	0.43	Acquire ROW	Centerline of road will be moved 36 feet to the north to pull roadway away from erosion area caused by Wade Creek.
H	87.8	0.09	Acquire ROW	Centerline of road will be moved a maximum of 81 feet to the north to pull roadway away from erosion area caused by Wade Creek.
I	89.1	0.11	Acquire ROW	Centerline of road will be moved a maximum of 81 feet to the north to pull roadway away from erosion area caused by Wade Creek and create a larger radius curve.
J	91	0.12	Acquire ROW	Centerline of road will be moved 19 feet to the southeast to pull roadway away from erosion area caused by Wade Creek and create a larger radius curve.
Total		5		

a Letter designation corresponds to the site identifier on Figures 3 through 12.
MP – Milepost

Proposed Section 4(f) Land Impacts Detail Descriptions

Area A - This section of highway is directly adjacent to the active channel of Wade Creek (Figure 4). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 67 feet to the west in this area. Shifting the centerline away from Wade Creek requires an additional 0.23 acre of ROW on the west side of the existing road alignment. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area B - This section of highway is directly adjacent to the active channel of Wade Creek (Figure 4). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 63 feet to the west in this area. Shifting the centerline away from Wade Creek requires an additional 0.11 acre of ROW on the west side of the existing road alignment. The old road embankment material would be removed in its entirety to prevent erosion of this material into Wade Creek.

Area C – This section of highway is directly adjacent to the active channel of Wade Creek (Figure 5). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 102 feet to the west in this area. Shifting the centerline away from Wade Creek requires an additional 0.41 acre of ROW on the west side of the existing road alignment. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area D - This section of highway is directly adjacent to the active channel of Wade Creek (Figure 6). Wade Creek is adjacent to the east side of the road where it often erodes and sometimes completely washes out this section of highway. To reduce these erosion problems, ADOT&PF proposes to realign the centerline a maximum of 66 feet to the west and eliminate the curve in the road in this area. Shifting the centerline away from Wade Creek requires an additional 0.17 acre of ROW on the west side of the existing road alignment due to the catch slope extending outside of the current ROW. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area E – This section of road is cut into a high, steep hillside adjacent to Wade Creek (Figure 6). In order to widen the road at this location fill would have to be placed in the active channel of Wade Creek or the hillside would need to be excavated. The preferred option, requested by BLM, would require excavation of the hillside so that Wade Creek is not impacted. The centerline of the road would be moved up to six feet to the north, which would force the excavation limits to extend outside of the current ROW. An additional 0.20 acre of ROW would be required. The existing road embankment material will be incorporated into the new road.

Area F – This section of the road is bound by Wade Creek on the east and a steep hillside on the west. Road base fill from the highway currently extends into Wade Creek and is often subject to erosion because it is located on an outside bend of the creek (Figure 7). ADOT&PF is proposing to move the road away from the creek to reduce future erosion. The centerline of the road would

be moved up to 17 feet to the east which would force the excavation limits to extend outside the current ROW. An additional 1.73 acres of ROW would be required. The existing road embankment material will be incorporated into the new road.

Area G - This section of the road is bound by Wade Creek on the east and a steep hillside on the west. Road base fill from the highway currently extends down a steep hillside adjacent to Wade Creek. The centerline of the road would be moved up to 36 feet to the east eliminating the curve and thereby moving the road away from Wade Creek (Figure 7). By moving the road away from Wade Creek the hillside would need to be excavated to accommodate the new alignment. Excavation of the hillside would require an additional 0.43 acre of ROW. The existing road embankment material will be incorporated into the new road.

Area H – This section of highway is directly adjacent to the active channel of Wade Creek and road base fill extends into Wade Creek (Figure 8). The curves are proposed to be straightened and the road moved up to 81 feet away from Wade Creek to avoid future erosion of the road. The relocation away from Wade Creek will extend the ditch excavation on the northwest side of the road beyond the current ROW, requiring an additional 0.09 acre of ROW. It is not possible to design the road to meet standards and stay within the current ROW because the short distance between the two substandard curves does not allow an adequate transition zone between curves. Eliminating the curves greatly reduces the potential for erosion of the roadway and enhances the roadway geometry. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area I – This section of highway is directly adjacent to the active channel of Wade Creek on the southeast and is bound by a steep hillside on the northwest (Figure 9). Wade Creek often erodes this section of highway. To reduce erosion problems, ADOT&PF proposes to realign the centerline a maximum of 81 feet to the northwest. To realign the road, additional ROW of 0.11 acre would be required on the northwest side of the existing alignment. The additional ROW is required because the limits of excavation on the inside of the curve would extend outside of the existing ROW. The old road embankment material will be removed in its entirety to prevent erosion of this material into Wade Creek.

Area J – This section of road is bound by Wade Creek on the west and a steep hillside on the east (Figure 11). The existing roadway fill extends into the active channel of Wade Creek and is frequently eroded by the creek. To prevent future erosion the road is being moved away from Wade Creek. The centerline is proposed to be moved a maximum of 19 feet to the east. Moving the road to the east requires the addition of 0.12 acre of ROW. The existing road embankment material will be incorporated into the new road.

TAYLOR HIGHWAY MP 64.5
TO THE
CANADIAN BORDER

SITE LOCATION AND VICINITY
FIGURE 1

JOB NO:	4444
DATE:	11/12/02
DRAWN BY:	DRM
CHECKED BY:	KKS

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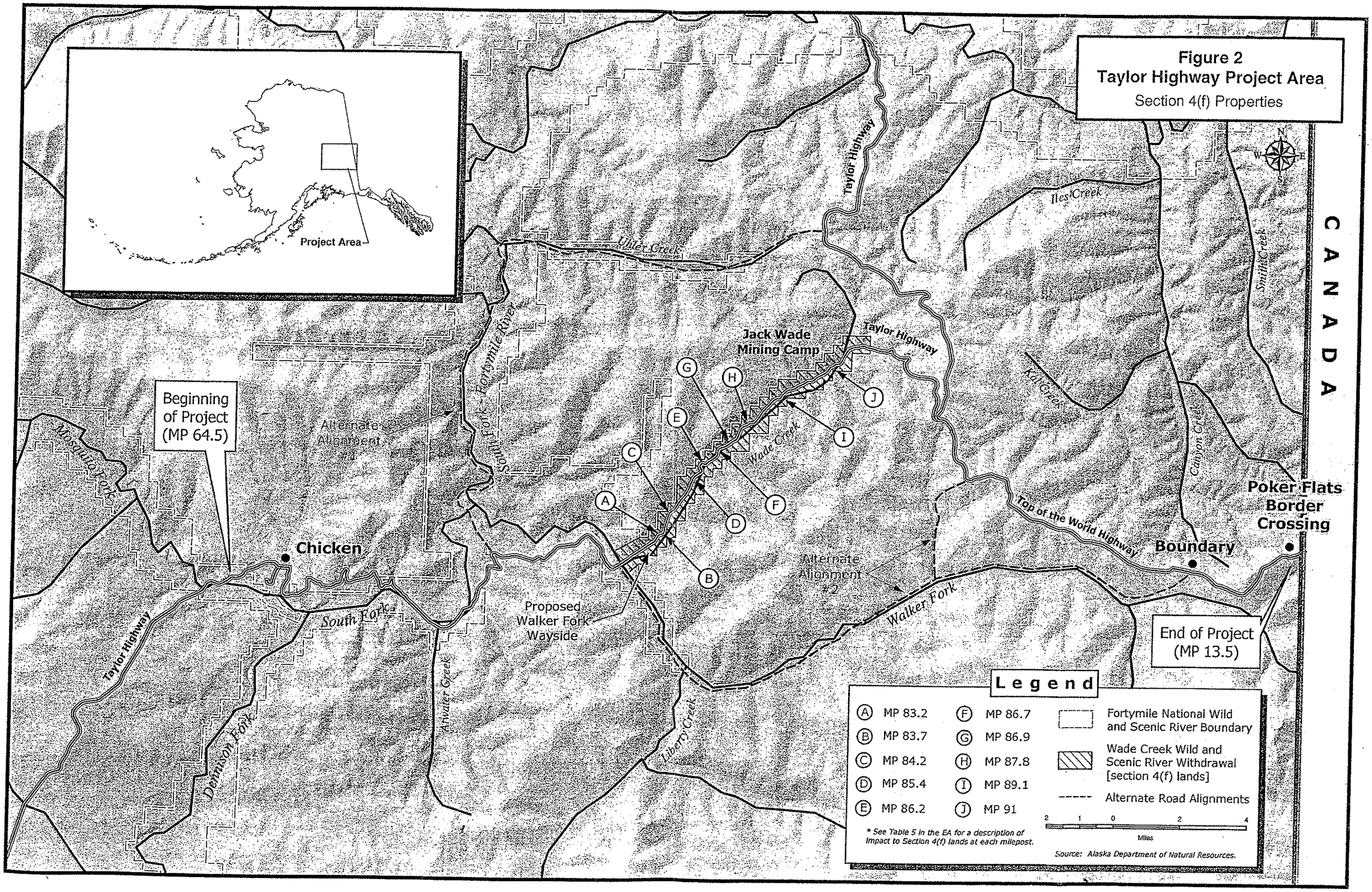
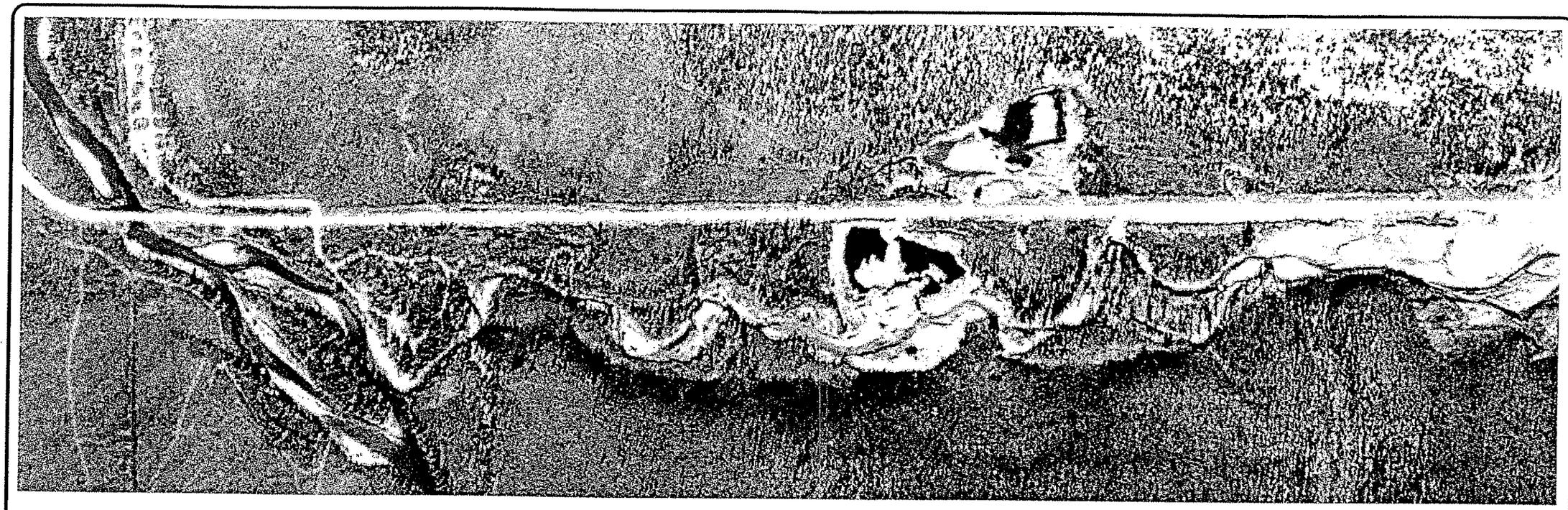
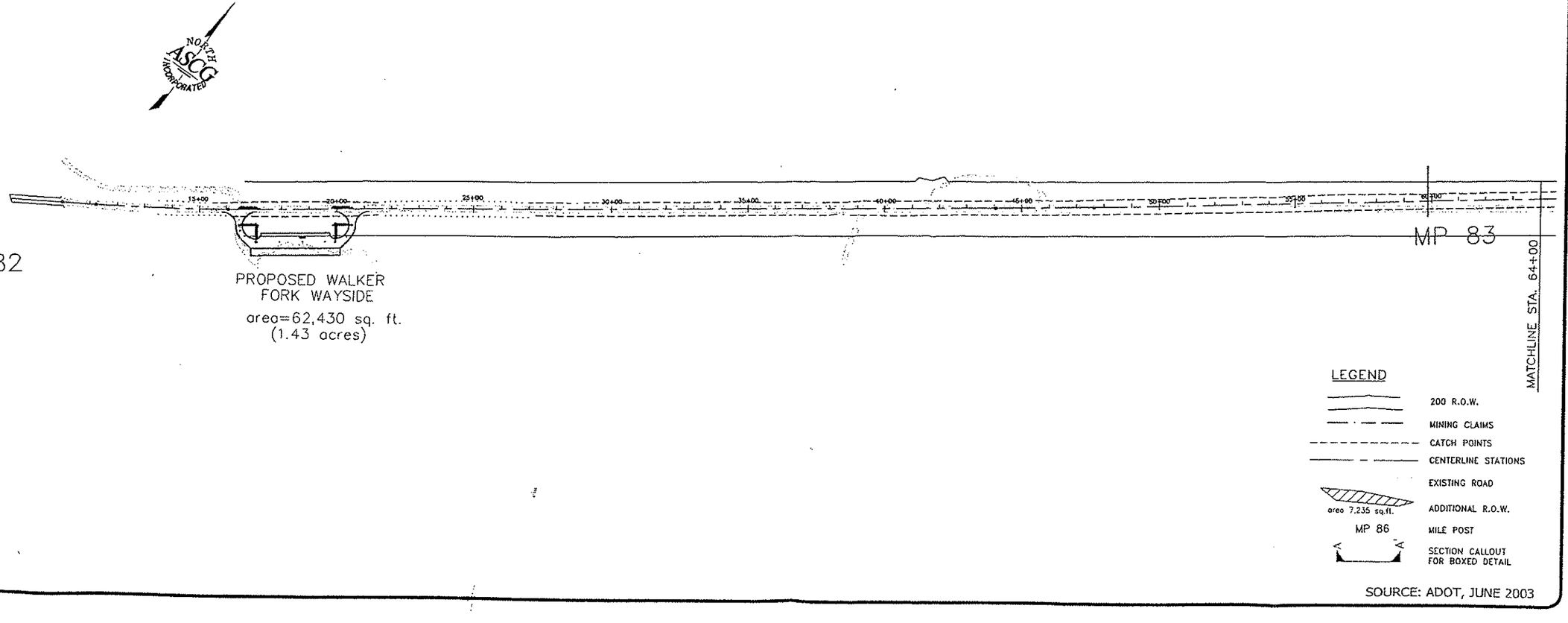
Figure 2
Taylor Highway Project Area
Section 4(f) Properties





SOURCE: BLM, 5-15-94



SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 3

JOB NO:	4444
DATE:	JULY-2003
DRAWN BY:	KML
CHECKED BY:	BM

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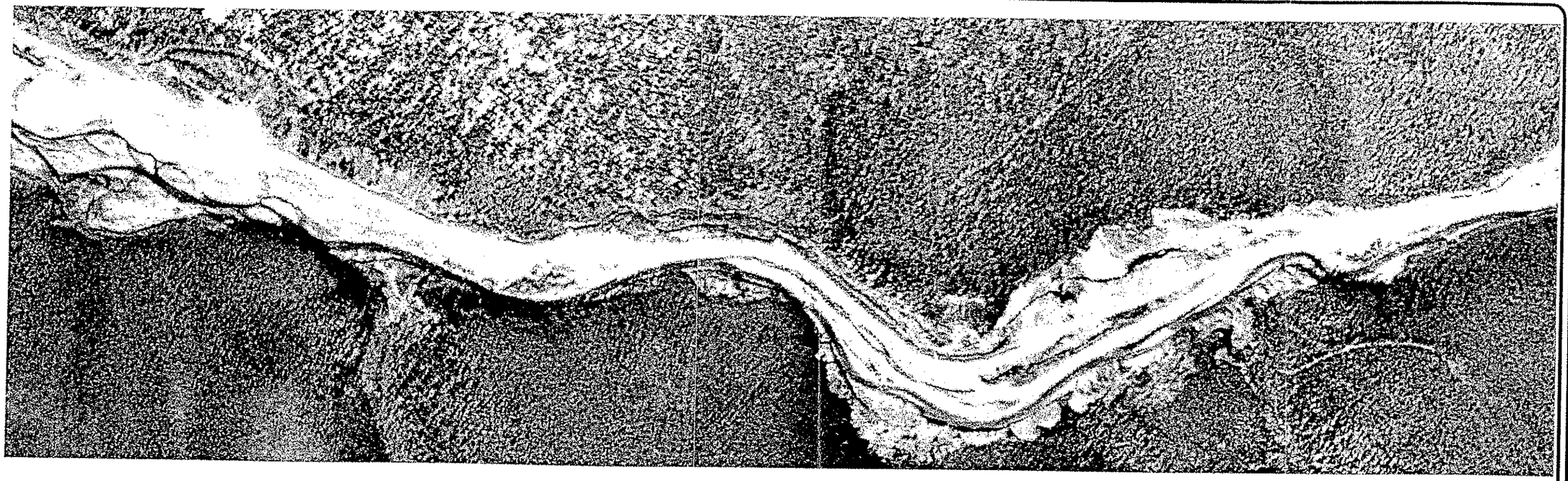
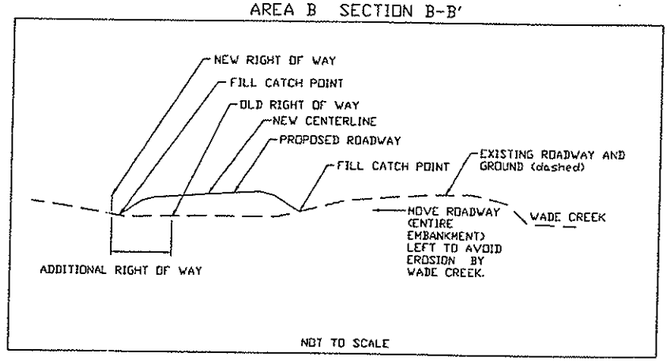


SOURCE: BLM, 5-15-94

AREA B SECTION B-B'



AREA A SECTION A-A'

LEGEND

- 200 R.O.W.
- MINING CLAIMS
- CATCH POINTS
- CENTERLINE STATIONS
- EXISTING ROAD
- area 7,235 sq.ft. — ADDITIONAL R.O.W.
- MP 86 — MILE POST
- SECTION CALLOUT FOR BOXED DETAIL

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 4

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DATE:	JULY-2003
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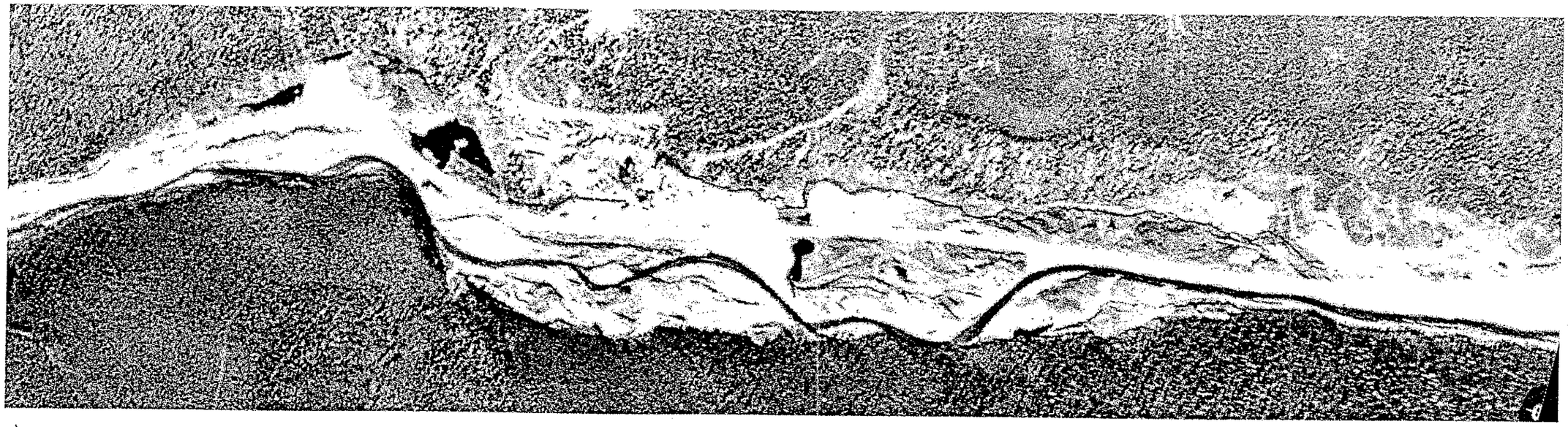

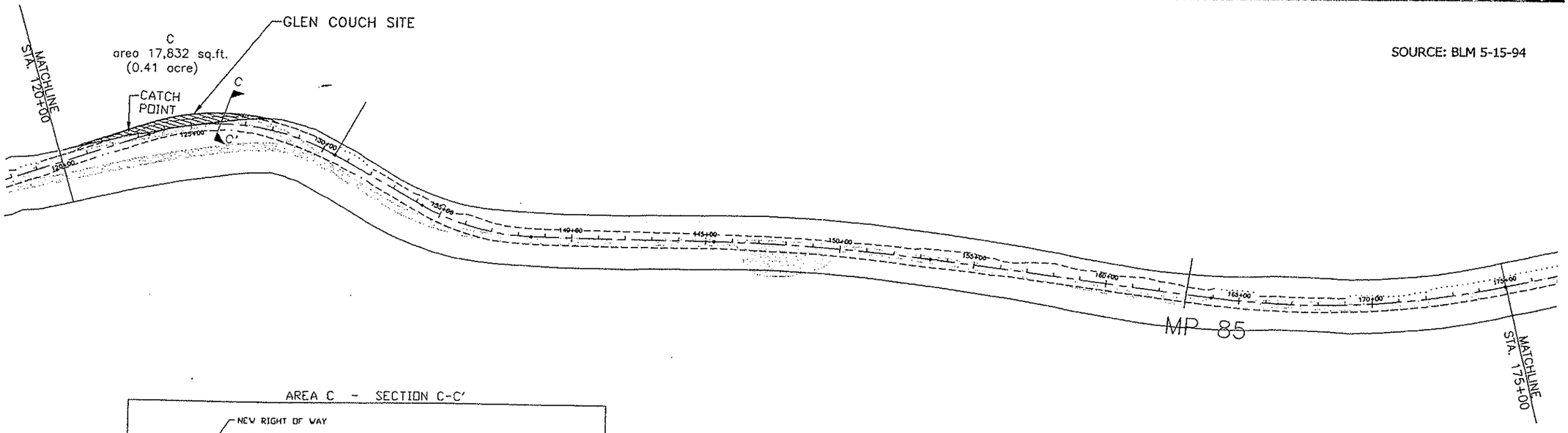

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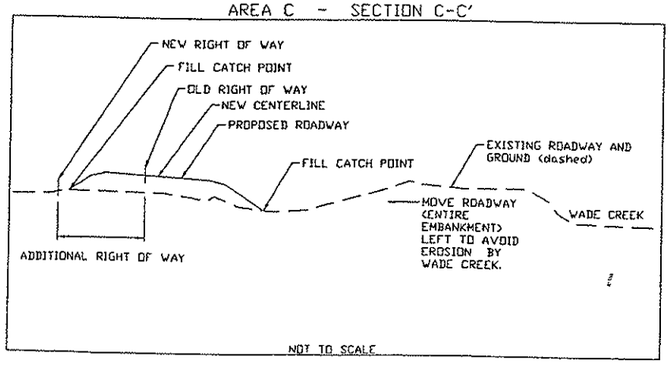

SOURCE: BLM 5-15-94

LEGEND

- 200 R.O.W.
- MINING CLAIMS
- CATCH POINTS
- CENTERLINE STATIONS
- EXISTING ROAD
- area 7,235 sq.ft. — ADDITIONAL R.O.W.
- MP 86 — MILE POST
- SECTION CALLOUT FOR BOXED DETAIL

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5 TO CANADA BORDER

SECTION 4(f) PROPERTIES FIGURE 5

JOB NO:	4444
DATE:	JULY-2003
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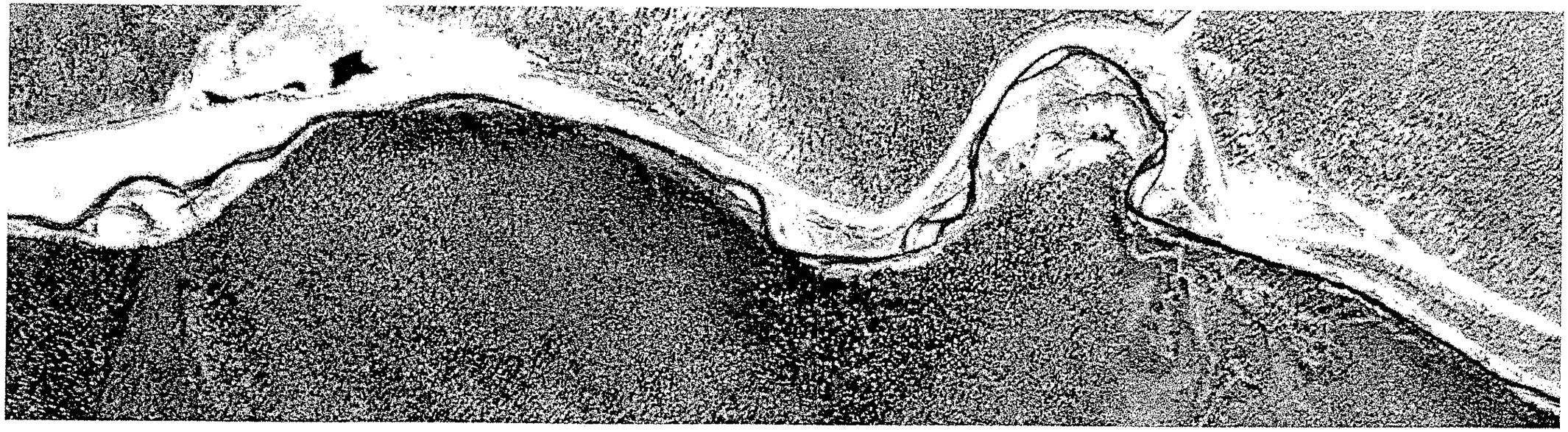
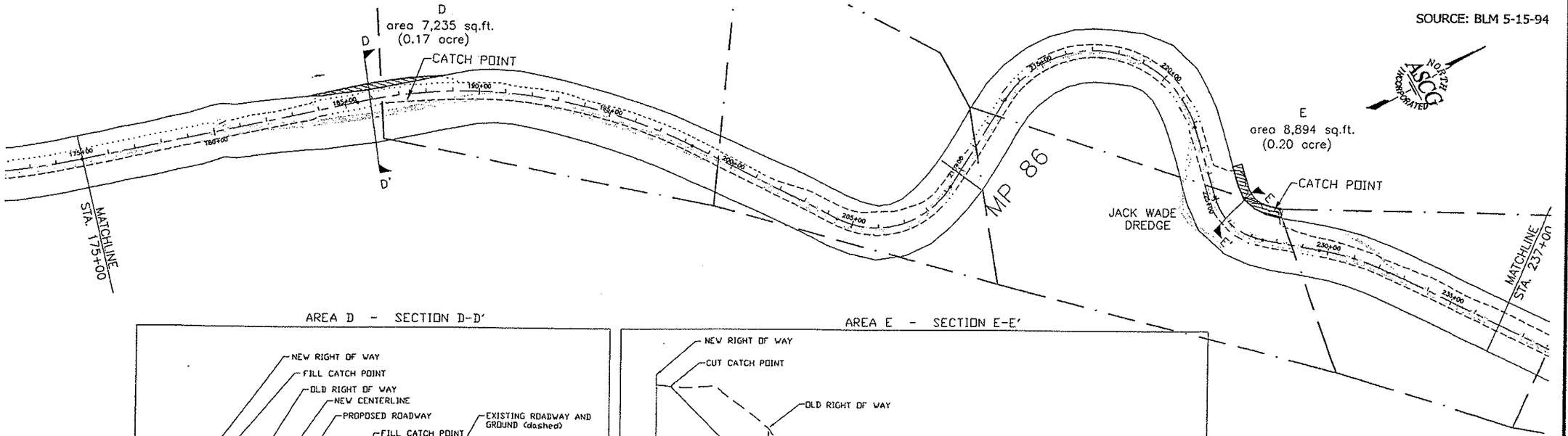
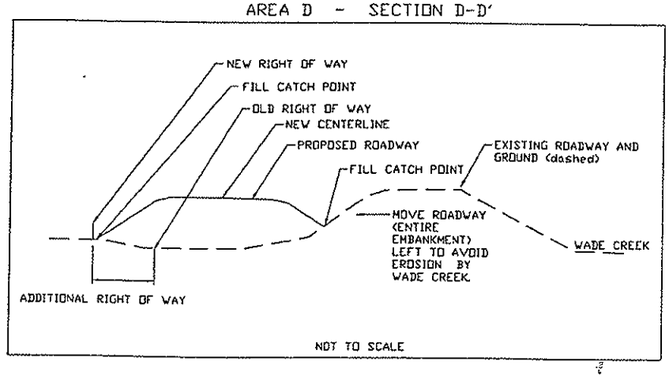


SOURCE: BLM 5-15-94



AREA D - SECTION D-D'



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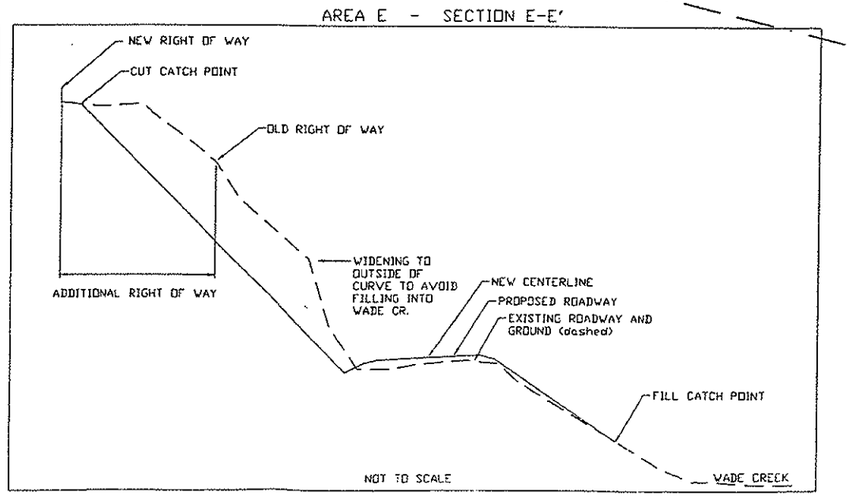

LEGEND

- 200 R.O.W.
- MINING CLAIMS
- CATCH POINTS
- CENTERLINE STATIONS
- EXISTING ROAD
- area 7,235 sq.ft. — ADDITIONAL R.O.W.
- MP 86 — MILE POST
- A A — SECTION CALLOUT FOR BOXED DETAIL

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 6

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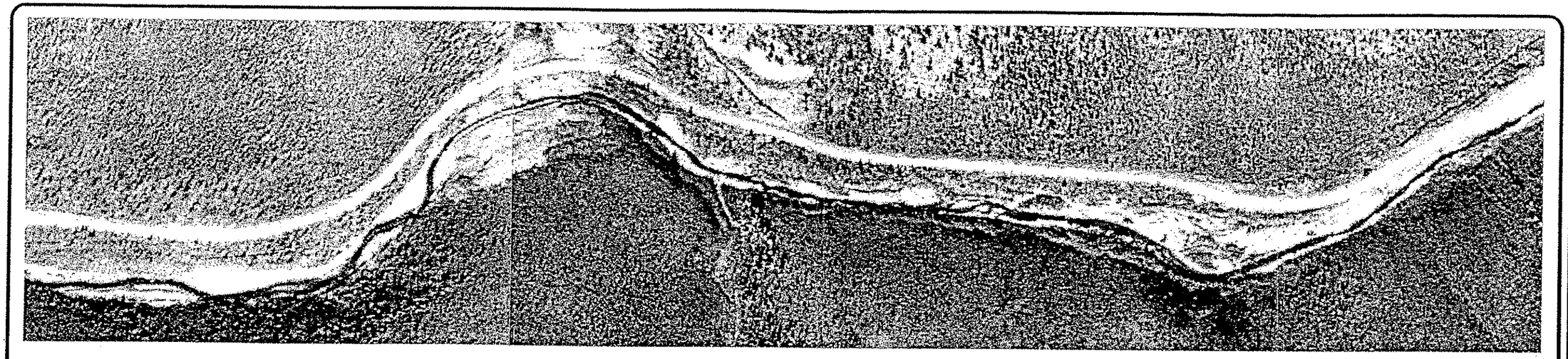
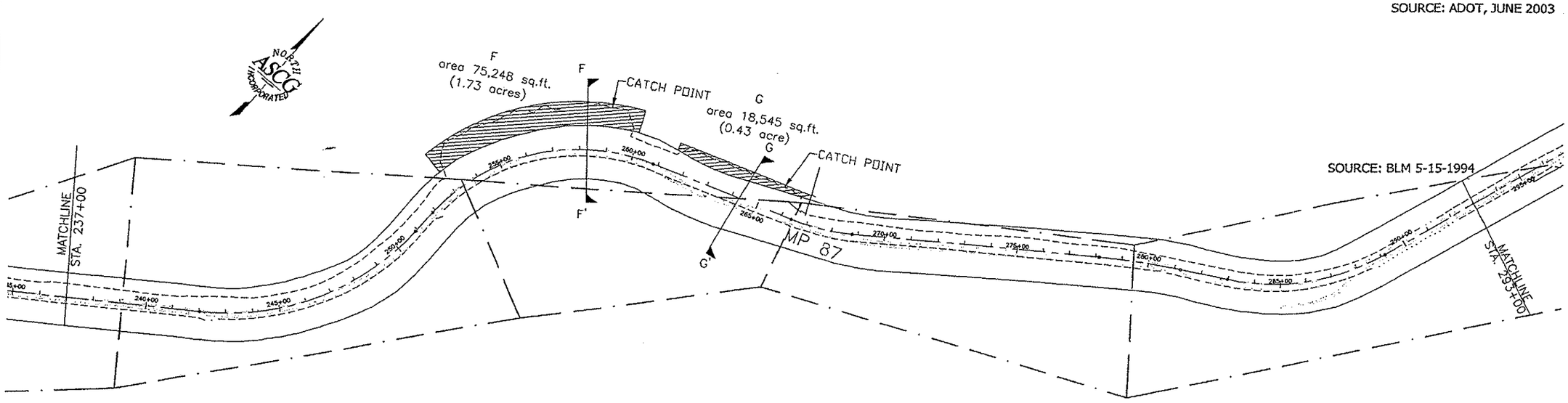
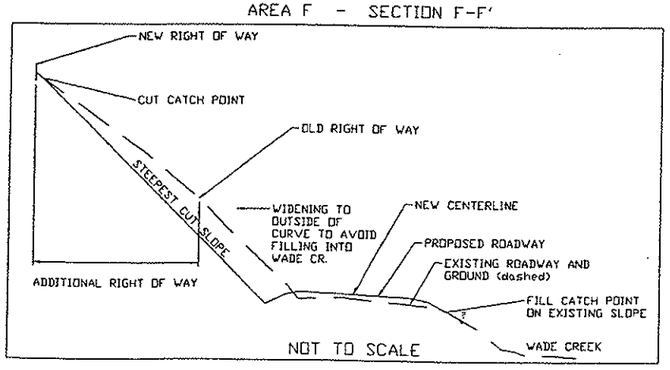


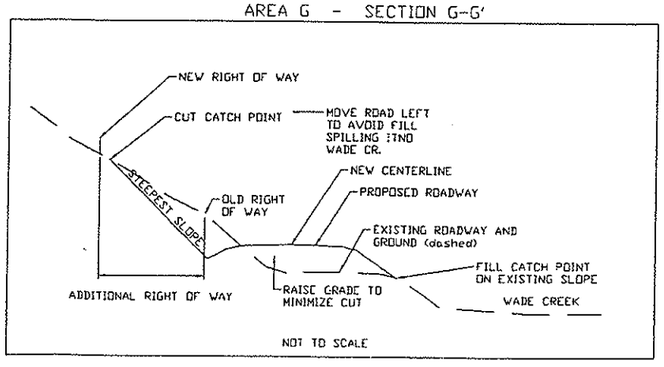
SOURCE: ADOT, JUNE 2003



AREA F - SECTION F-F'



AREA G - SECTION G-G'



LEGEND

- 200 R.O.W.
- MINING CLAIMS
- CATCH POINTS
- CENTERLINE STATIONS
- EXISTING ROAD
- area 7,235 sq.ft. — ADDITIONAL R.O.W.
- MP 86 — MILE POST
- A A — SECTION CALLOUT FOR BOXED DETAIL

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 7

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DATE:	JULY-2003
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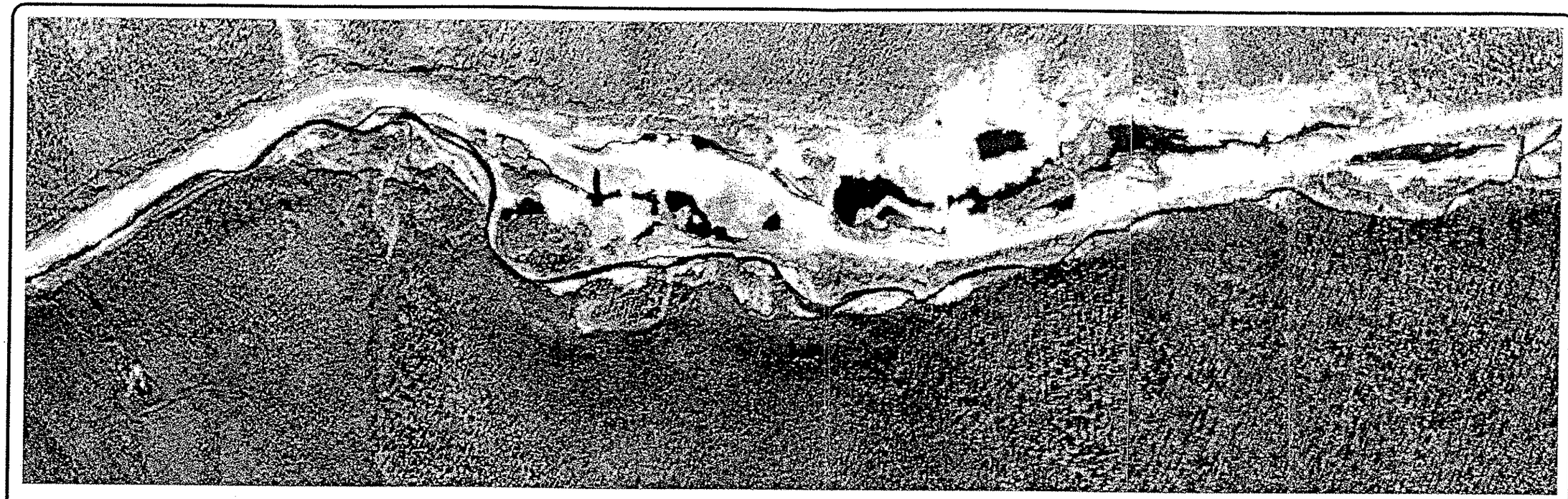

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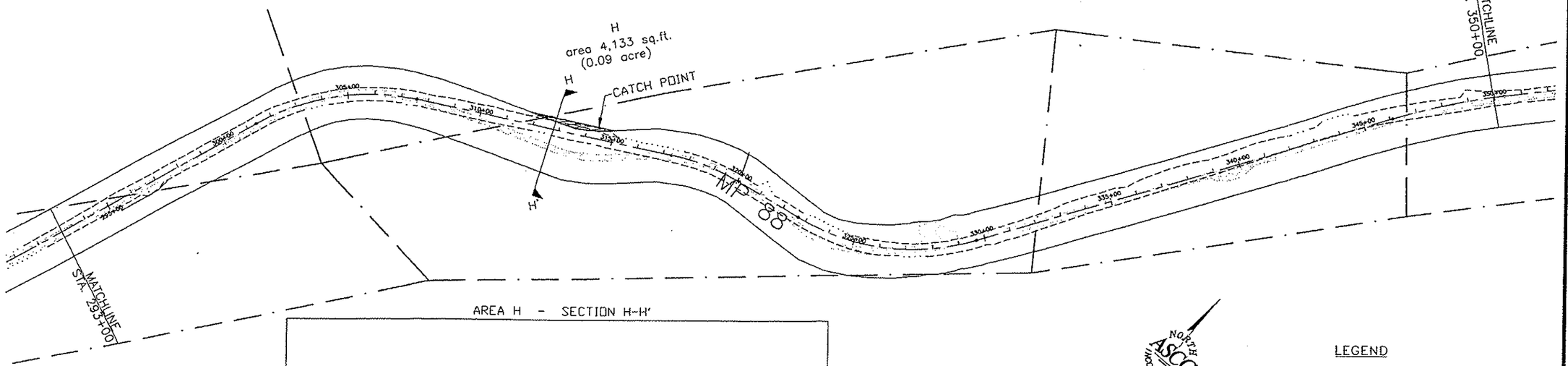
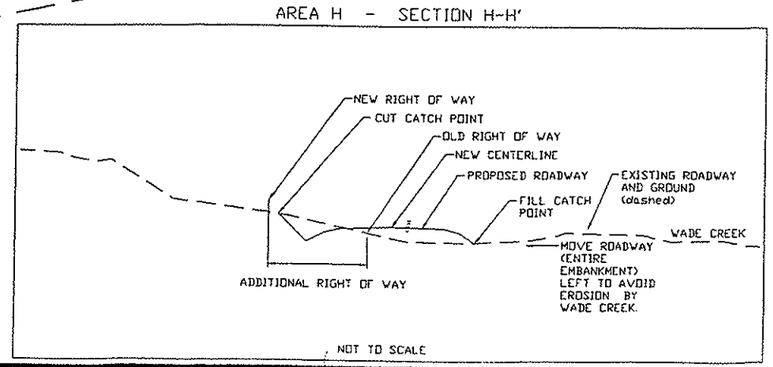


AREA H - SECTION H-H'



NORTH
ASCG INCORPORATED

LEGEND

- 200 R.O.W.
- MINING CLAIMS
- CATCH POINTS
- CENTERLINE STATIONS
- EXISTING ROAD
- area 7,235 sq.ft. — ADDITIONAL R.O.W.
- MP 86 — MILE POST
- A A — SECTION CALLOUT FOR BOXED DETAIL

SOURCE: BLM 5-15-2003

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 8

JOB NO:	4444
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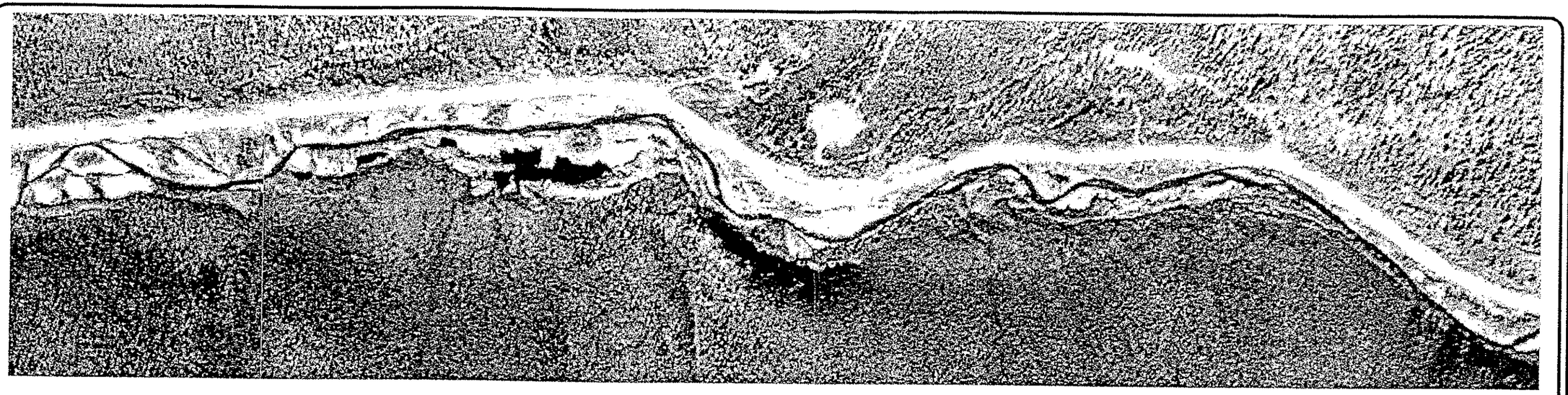

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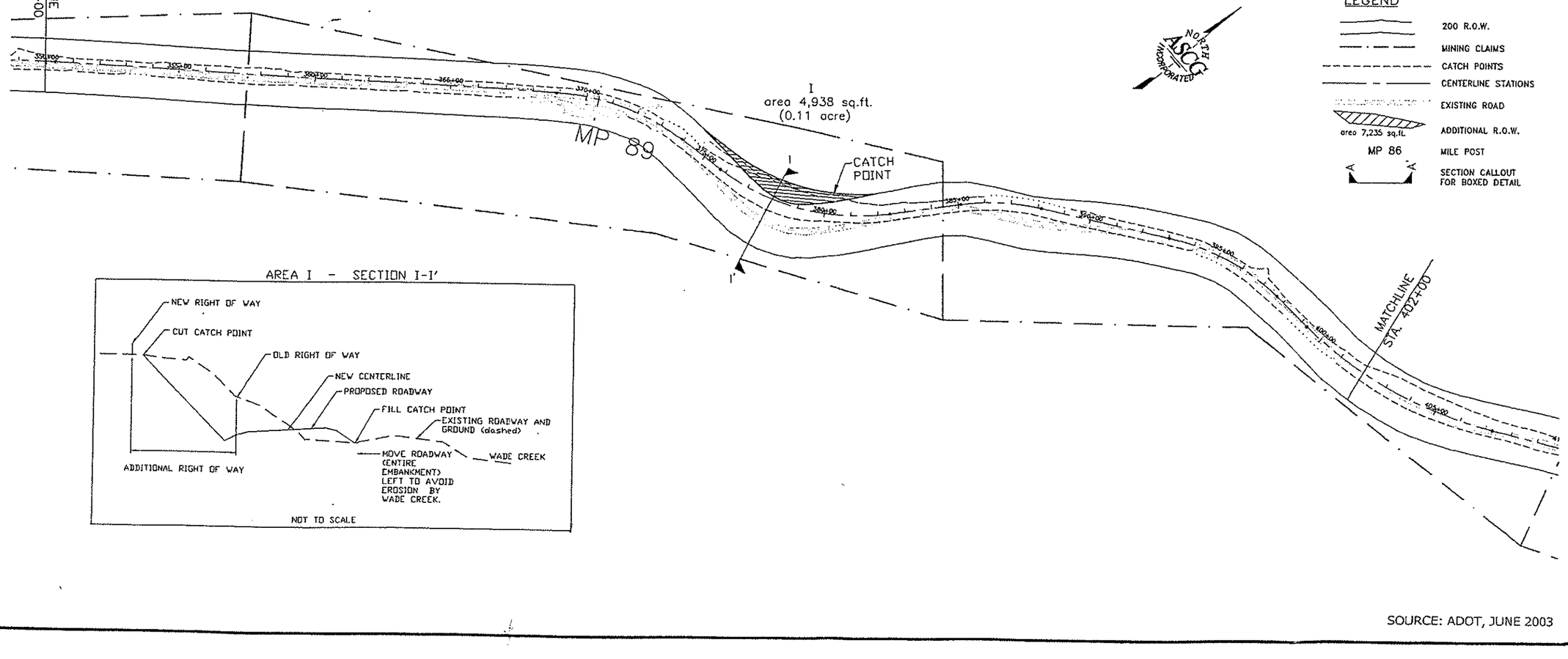

AREA I - SECTION I-I'

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 645 TO CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 9

JOB NO.:	4444
DATE:	JULY-2003
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SOURCE: BLM 5-15-94

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 10

JOB NO.:	4444
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SOURCE: BLM 5-15-94

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 11

JOB NO:	4444
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SOURCE: BLM 5-15-94

LEGEND

- 200 R.O.W.
- MINING CLAIMS
- CATCH POINTS
- CENTERLINE STATIONS
- EXISTING ROAD
- area 7,235 sq.ft. — ADDITIONAL R.O.W.
- MP 86 — MILE POST
- A A — SECTION CALLOUT FOR BOXED DETAIL

SOURCE: ADOT, JUNE 2003

TRANSPORTATION & PUBLIC FACILITIES
STATE OF ALASKA

TAYLOR HIGHWAY MP 64.5
TO
CANADA BORDER

SECTION 4(f) PROPERTIES
FIGURE 12

JOB NO:	4444
DATE:	JULY-2003
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CHECKED BY:	BM

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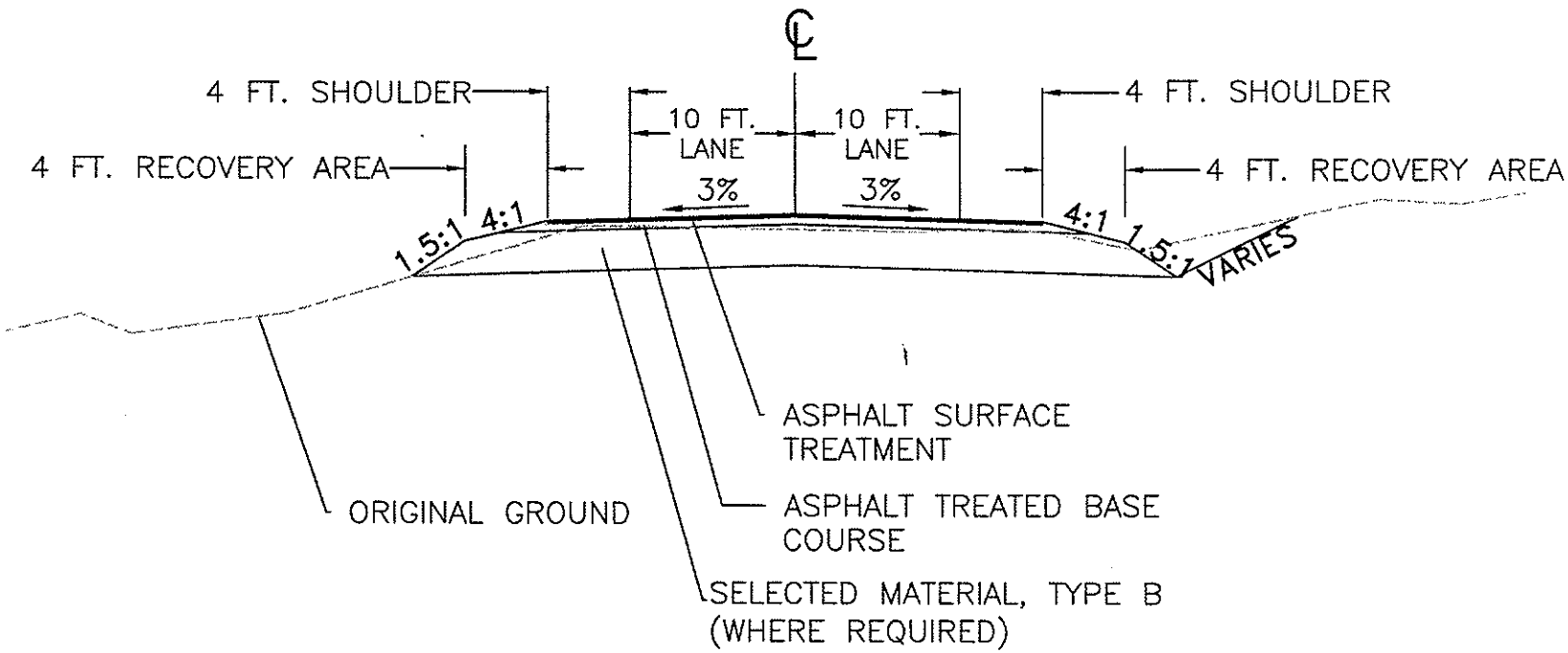
K:\JOB\11\4444 - Taylor Hwy EA\Acad\FIG 13 TYPICAL ROAD SECTION.dwg



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CHECKED BY:	KKS

TYPICAL ROAD SECTION
FIGURE 13

TAYLOR HIGHWAY MP 64.5
TO THE
CANADIAN BORDER

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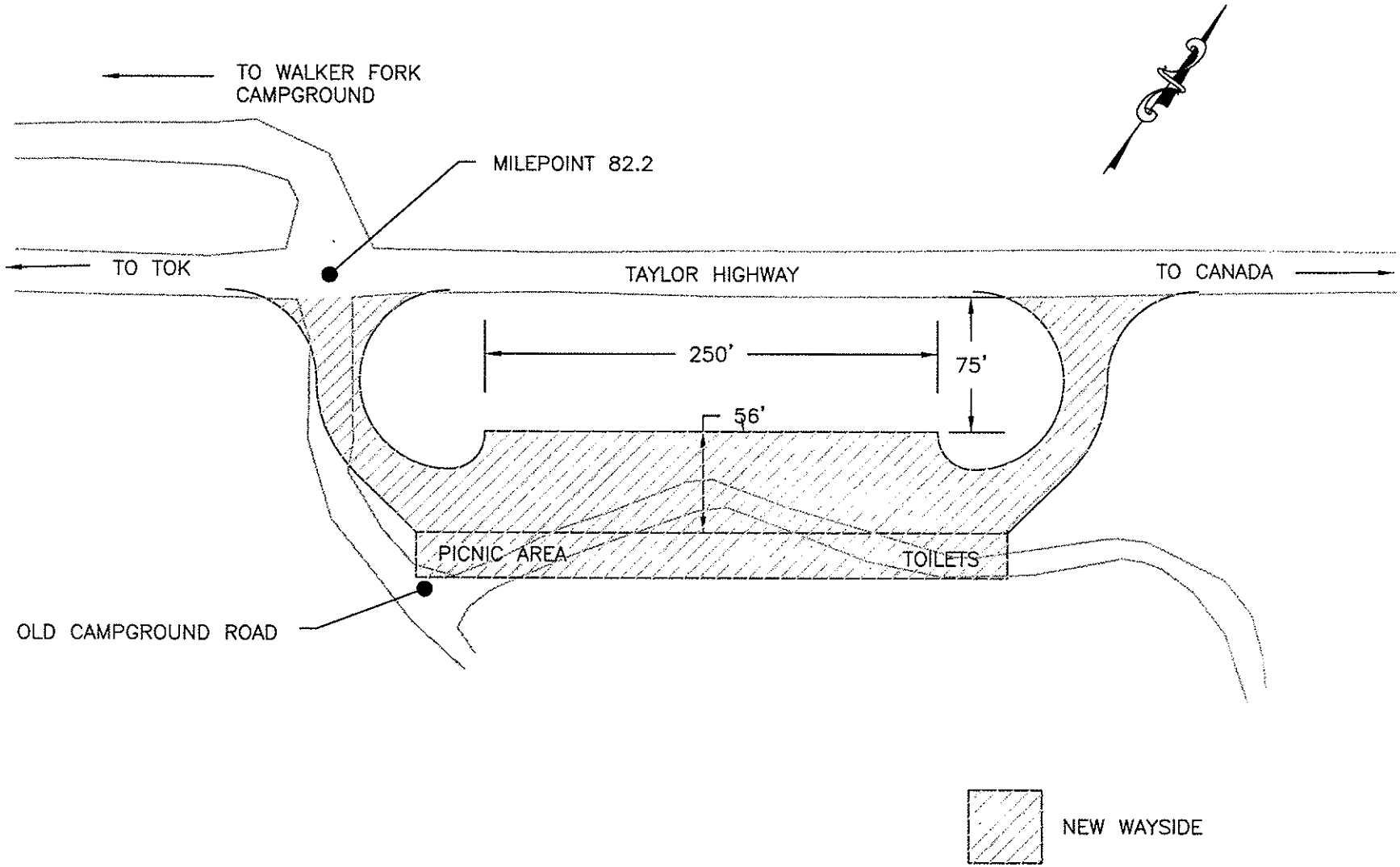

JOB NO.:	4444
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CHECKED BY:	KCS

WALKER FORK WAYSIDE
PRELIMINARY PLAN VIEW
FIGURE 14

TAYLOR HIGHWAY MP 64.5
TO THE
CANADIAN BORDER

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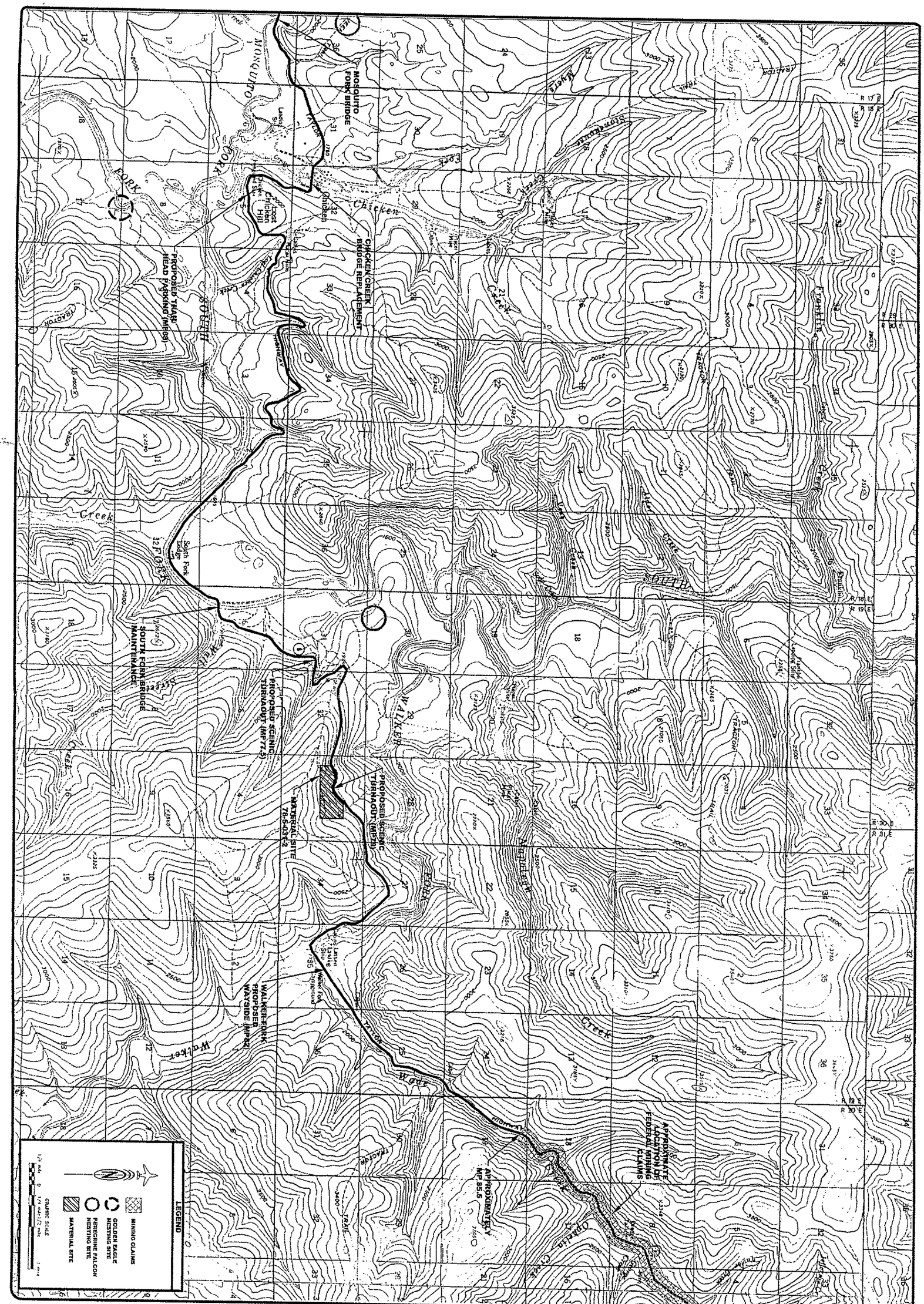

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CHECKED BY:	MMS

PROJECT DETAIL MAP 1
FIGURE 15

TAYLOR HIGHWAY MP 64.5
TO THE
CANADIAN BORDER

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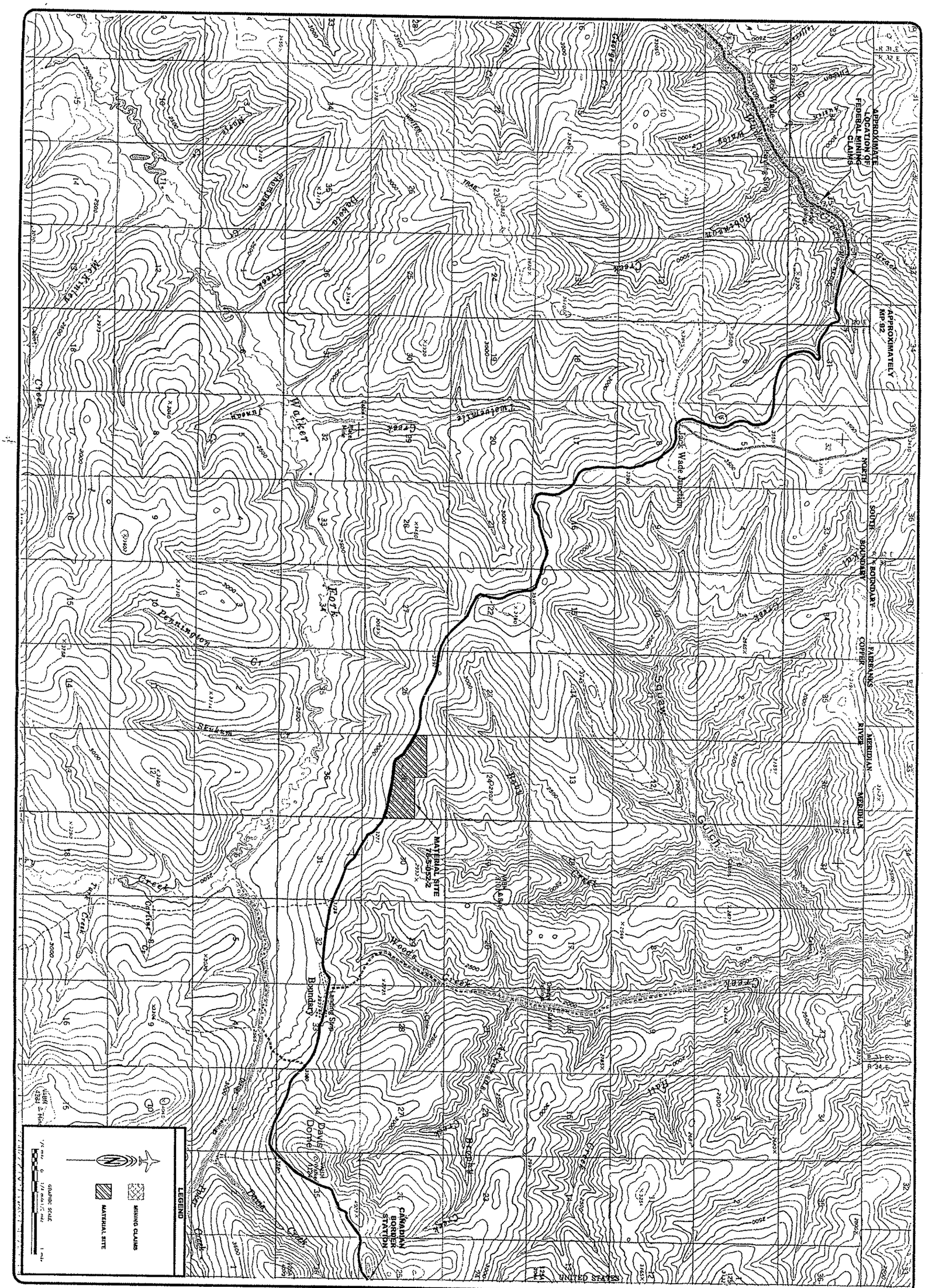

JOB NO:	4444
DATE:	11/12/02
DRAWN BY:	DRM
CHECKED BY:	RNS

PROJECT DETAIL MAP 2
FIGURE 16

TAYLOR HIGHWAY MP 64.5
TO THE
CANADIAN BORDER

September 17, 2004 update

Preliminary Finding (BLM) Pursuant to Section 7 of the Wild and Scenic Rivers Act For the Proposed Taylor Highway Project (MP 64 near Chicken, Alaska, north to the Canadian Border)

Proposed Action

The State of Alaska Department of Transportation and Public Facilities (ADOTPF) proposes to upgrade the portion of the Taylor Highway that parallels Wade Creek. The purpose of the project is to improve the safety of those traveling the highway, lower scheduled maintenance costs, and reduce the negative effects of flooding on the highway and the waters of the area. As of April 2003 the project has not been precisely described by design drawings. The detailed design will only be prepared following approval of the National Environmental Policy Act (NEPA) process and if funding is obtained for the project.

The following are descriptive excerpts from the scoping documents provided by ADOTPF:

"**Alignment** – *The present highway alignment will be maintained except for minor realignments to reduce curvature on corners and shifting the highway away from the Wade Creek floodplain between MP 84 and 85. The proposed highway realignments at corners average 0 to 15 meters (0 to 50 feet) from the existing highway centerline. Along Wade Creek , the maximum shift is 30 meters (0 to 100 feet) from the centerline. The road will be improved by widening the road to 28 feet with two 10-foot lanes and 4-foot shoulders and surfaced with "high float asphalt". Drainage will be improved to convey water away from the road by ditching parallel to the road and installing cross-drainage under the road.*"

"**Material and Disposal Sites** – *Material for road construction will come from road cuts/unclassified excavation and tailings from Wade Creek. There are also nine state-owned material sites available if they are needed during construction. Figures 1 and 2 show the locations of material sites. Additional unclassified excavation will be used as slope flattening in non-wetland areas. Disposal sites have not yet been identified. A Storm Water Pollution Prevention Plan and all necessary permits and clearances for material and disposal sites will be obtained prior to construction.*"

"**Impacts to Water Bodies** – *Streams within the project corridor that could be temporarily affected by road rehabilitation include: Chicken Creek, Lost Chicken Creek, South Fork, Walker Fork, Wade Creek, Warner Creek, Gilliland Creek, and several unnamed tributaries to Wade Creek. The Chicken Creek bridge will be replaced with a single span bridge. In-water work will be required at the Chicken Creek bridge for replacement of the old bridge. Approach and bridge railing work will be performed on the South Fork and Walker Fork bridges. In-water work will be required at the South Fork Bridge to repair a concrete pier. Work will be conducted at and below the water line. No reclamation of the Wade Creek floodplain will occur as outlined in previous*

project plans. An ADF&G habitat permit will be required for work in fish bearing streams including Chicken Creek and South Fork."

"**Culverts**-*Culverts will also be installed at numerous locations to maintain natural drainage patterns. All culverts will be sized and installed to maintain water flow during high-water conditions and prevent restriction of fish passage. Culvert design and installation will follow guidance outlined in the "Memorandum of Agreement – Design, Permitting and Construction of Culverts for Fish Passage" between the ADOT&PF and ADF&G*"

"**Flood Plain Management** – *There are no Federal Emergency Management Agency Flood maps for the project area. The Alaska Community Flood Hazard Information website did not have flood information for Chicken or Boundary. According to a BLM publication Water Resources of the Fortymile National Wild & Scenic River, Alaska, the Mosquito Fork is subject to flooding during moderate to high water, the South Fork is subject to flooding only during extreme high water, and the Walker Fork is subject to flooding during moderate to high water. During the site visit there was evidence of erosion from high water of the Taylor Highway along Wade Creek at approximately MP 83 and 84. The proposed project will move portions of the Taylor Highway out of the Wade Creek floodplain.*"

"**Wetlands** – *There are no National Wetlands Inventory Maps available for the project area. A wetlands delineation based on aerial photography and field verification was conducted on September 10 to 13, 2002. A wetlands delineation report is currently being prepared. Preliminary information indicates that most areas with black spruce forest are considered wetlands along the Taylor Highway. Changes in the road footprint will likely result in impacts to the forested spruce wetlands. There are also scrub shrub and emergent wetlands associated with Wade and Walker Creeks along the road right of way. These wetlands have been highly disturbed by mining activities. It is likely that a Section 404 permit would be needed from the USACE for the proposed project.* "

Background Information

Wade Creek is a component of the Fortymile National Wild and Scenic River (FNWSR) system, and is managed as a recreational river area. Walker Fork and South Fork are also part of the FNWSR managed as scenic river areas. The proposed upgrade of the highway will require the placement of fill and riprap that could restrict the ability of the Wade Creek channel to meander naturally within its valley. Because of this direct impact on the "free-flow" of the stream, the Bureau of Land Management as federal manager of the wild and scenic river area is required to determine whether or not the proposed action will have a "direct and adverse" impact on the values for which Wade Creek was added to the national system pursuant to Section 7 of the Wild and Scenic Rivers Act. As mentioned above, we lack detailed and final information about the project. We do not know exactly how much fill or riprap will be used or exactly where the road will be moved from its existing location, nor do we know where the existing stream lies relative to the road. However, we do know that the project will likely result in improved water quality in Wade Creek, a more stable roadbed, and that when the roadbed is realigned, it will likely move away from the creek rather than towards it. This draft finding was prepared based on preliminary working drawings and tabular information, incomplete surveys, and discussions with DOT staff.

One interesting fact which is quite unusual for wild and scenic river areas, is that throughout the project area Wade Creek does not flow in a "natural" channel. Instead, the stream has been moved about for decades by miners whose rights under the mining laws supercede the protections provided by the Wild and Scenic Rivers Act. Miners had rights that also predated the right-of-way for the road and routinely rerouted the highway and stream in the process of mining their claims. Miners have left over 650 acres of river bottom land in unstable condition (moving approximately 1,140,000 cubic yards of material in the process), buried dozens of acre-feet of silt in former settling ponds, and created piles of tailings containing many thousands of cubic yards of rock. These practices have decreased the average depth and sinuosity of Wade Creek and increased turbidity and bedload creating a situation where the channel has been unstable since at least the early 1900's. This unstable channel led to persistent flood damage to the Walker Fork Tent Campground that was been closed as a result by BLM. The instability of the channel and floodplain has also contributed to periodic washouts of the Taylor Highway causing episodes of impaired water quality during the flood events and during reconstruction activities.

Affected Environment

Direct alteration to within-channel conditions

The proposal includes several areas where the current channel runs right along the road. In these areas, the road would be moved away from the creek. This would have the effect of moving the artificial stream bank provided by the existing road fill that would effectively widen the flood plain. While new stream channel would not be constructed during the project, it is likely that the stream would become more sinuous and that channel slope, depth, and velocity would all decrease in these areas. Removal of roadway materials from the floodplain in those areas where realignment occurs would create short-term disturbance, primarily erosion and sedimentation during construction, but the additional space created within the Wade Creek floodway would help minimize long-term effects of flooding.

The improvements to channel stability conditions could be greatly enhanced if the road were moved above the floodplain and if the mining tailing piles and capped settling ponds were more fully reclaimed.

While removal of material from the floodplain would create short-term disturbance to the Wade Creek floodplain during construction, the additional space created within the floodway would help minimize effects of flooding such as erosion and sedimentation that currently impact the stream. Blending the former tailings piles to create better drainage as well as seeding to promote revegetation would be an improvement over the existing unreclaimed tailings piles scattered along the floodplain.

Changes to water quality as a direct result of the project

Currently the natural drainage patterns are disrupted by past mining activities, the existing road, and the lack of culverts working to divert, impede, or block flow in stream channels. Blockages or diversions resulting from insufficient flow capacity can result in seasonal or permanent impoundments. Diverting stream flow can also result in increased bank or shoreline erosion and sedimentation as well as potential thermokarst where

permafrost is present. Proper siting and adequate design capacity of culverts and bridges will minimize these impacts. Any short-term disturbance, primarily erosion and sedimentation during construction, would be offset by the reduction in the flood damage that occurs annually within the watershed from the current deranged drainage and inadequate culverts.

During the construction phase water quality would decrease due to soil disturbance. In the mid- to long-term, water quality should improve somewhat due to the decrease in average velocity and control of runoff through improved road design and improved culvert design and installation.

Changes to fish habitat as a direct result of the project
Walker Fork currently supports an Arctic grayling fishery. Slimy sculpin, longnose sucker and whitefish species are present as well. There are no anadromous fish migrating, spawning, or rearing in Walker Fork. Arctic grayling and slimy sculpin may migrate into Wade Creek during the summer months to take advantage of feeding opportunities in its tributaries.

The proposed activity is unlikely to have negative impacts and may benefit the fish using Walker Fork and Wade Creek. Wade Creek currently has little suitable habitat (spawning or rearing) to support a resident fish population.

If the project included moving the road out of the floodplain, and reclamation of mining impacts, the beneficial impacts would be maximized. Floodplain restoration and revegetation would create new habitat and enhance the small resident fishery.

Changes to navigability of the stream as a direct result of the project
To the best of our knowledge, Wade Creek is not suited for boating due to lack of adequate depth except during flood events. The proposal would not affect navigability during normal or flood flows.

Direct alteration to riparian and floodplain conditions
The plan and profile annotated by ADOT engineers indicates that up to approximately 3.5 miles of road at an average shift of 28 feet will require realignment along Wade Creek. Bank armoring (possibly including riprap) may be required along approximately two miles of road. Construction or other activities (such as material sites, equipment storage, and construction camp sites) that could affect the streambanks, floodplain, or remove protective shoreline vegetation might disturb up to double the area of road realignment or up to 25 acres during construction.

The bridgework proposed by ADOT involves no surface disturbing activities in the floodplain due to the use of pier coffer dams, boating the crews to the work area, and supply lines running from the top of the bridge structure. Thus, there should be minimal impacts during construction and no impacts afterwards. Other than a short stretch of roadway near the South Fork ADOT camp where the river is currently eroding the road, no realignments are proposed within the FNW&SR corridor except at Wade Creek. The maximum shift of the road alignment estimated to be less than 150 feet from the existing centerline will definitely not be sufficient to move any existing portion of the road out of the Wade Creek floodplain. The additional space created within the floodway by shifting

the road away from the creek an average of 28 feet would help minimize effects of flooding such as erosion and sedimentation that currently impact the stream whenever it rains.

ADOT does require an Erosion and Sediment Control Plan (ESCP) to ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. Stabilization practices may include: temporary and permanent seeding, mulching, geotextiles, vegetative buffer strips, protection of trees, preservation of mature vegetation, construction phasing, and other appropriate measures. The surfaces of the existing embankment slopes are coarse gravel. Temporary stabilization practices may include temporary seeding, surface roughening, construction of mulching, and construction phasing. Permanent stabilization practices consist of limited areas of permanent seeding. Structural practices that may be implemented to divert flows from exposed soils, store flows, or limit runoff and discharge of pollutants from the exposed areas of the site may include silt fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Temporary structural practices shall include straw bale barriers, silt fences, temporary shoulder berms, brush barriers, sediment traps, check dams, and temporary pipe outlet protection. The ESCP also requires that steps be taken during the construction process to control pollutants in storm water discharges that may occur after construction operations have been completed. These measures may be subject to Section 404 of the Clean Water

This project would create over 12 acres of additional floodplain adjacent to Wade Creek after construction is completed. This area would act as an additional buffer strip, separating the creek from the road. The increase in floodway width would help minimize effects of flooding such as erosion and sedimentation that currently impact the stream whenever it rains. Regrading and blending the former roadbed to create more direct drainage as well as revegetation of the newly created floodplain would be a great improvement over existing conditions.

High-value wetlands—those that provide critical aquatic habitat to fish, birds, or mammals for feeding, nesting, or habitation—are almost nonexistent within the project area. The ponds and marshes adjacent to the road along Wade Creek resulted from ground disturbance during past placer mining. Many are either old settling ponds or small stream diversions that collect storm runoff but cannot drain due to mining berms or roadbed that block the drainage. Clearing the berms, road realignment, new culverts, and proper regrading will help restore the natural drainage pattern. Revegetation associated with the road reconstruction may eventually restore some of the seasonally flooded marshy and riparian areas adjacent to the creek.

Direct alteration to upland conditions particularly outstandingly remarkable values
The proposed action as described is unlikely to affect upland conditions significantly so long as standard stipulations to preserve historic and cultural resources are followed. Evidence of historic human activity in the area is one of the values for which the area was designated and should be protected adequately by site specific cultural reviews and standard stipulations required by the State Historic Preservation Officer.

Relationship of the project to river management goals

Most of the project involves reconstruction of the current roadway and replacement of existing culverts so impacts should be minimal using proper sediment control during construction. The bridgework proposed by ADOTPF involves no surface disturbing activities to the channel or stream banks so should have minimal impacts during construction and none afterwards. The road realignment for the Wade Creek section of the project involves a total of up to 3.5 miles of road at an average shift of 28 feet and could cause up to 25 acres of disturbance to the Wade Creek floodplain. Short-term disturbances, primarily removal of vegetation and erosion and sedimentation during construction, would occur in areas where Wade Creek is adjacent to the road. However, ADOT does require an Erosion and Sediment Control Plan to ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. After construction is completed, the additional space created by moving the road away from the creek would create over 12 acres floodplain to act as a buffer strip, separating the creek from the road. This additional space within the floodway would help minimize long-term impacts of flooding, such as erosion and sedimentation that currently impact the stream whenever it rains. The new culverts should also reduce the flood damage from the current lack of proper drainage and inadequately sized and spaced culverts. The project should improve public safety and generally improve environmental conditions in the stream and floodplain which is consistent with the BLM's wild and scenic river management mandate to protect and enhance free-flow, water quality and outstanding values of the river area. The proposed project would not avoid all impacts to the river area because of constrained funding sources for small improvements to alignment rather than wholesale relocation,. There will still be confinement of the stream particularly during floods, and there will still be impacts to water quality due to runoff from the road area and adjacent mining disturbance.

Since the existing roadway adjacent to Wade Creek currently poses significant problems, due to the diversions, impoundments, and increased sediment runoff whenever it rains, moving the road as far as possible away from the creek would have the greatest single reduction in impacts to the water resources. Clearing the berms, road realignment, new culverts, and proper regrading would help to restore the natural drainage pattern. Revegetation associated with the road reconstruction may eventually restore some of the seasonally flooded marshy and riparian areas adjacent to the creek.

Section 7 finding

Our preliminary finding is that the proposed project would not have a direct and adverse effect on the potentially impacted components of the Fortymile National Wild and Scenic River system. Given the fact that the project has yet to be designed in detail, we can only make a preliminary Section 7 finding based on the scoping information and informal discussions we have held with ADOTPF staff.

The above determination was analyzed by the following individuals from the Northern Field Office and the Fortymile Management Team:

Hydrologist - Jon Kostohrys
Outdoor Recreation Planner - Lon Kelly
Fisheries Biologist - Ingrid McSweeny
Fortymile Team Manager (as of August 8, 2003) - Mary Figarelle

I concur with the preliminary finding that the proposed Taylor Highway project would not have a direct and adverse effect on the potentially impacted components of the Fortymile National Wild and Scenic River system.

Robert W Schneider Date: 9/21/04

Robert W. Schneider, Field Manager

Bureau of Land Management
Northern Field Office
1150 University Avenue
Fairbanks, AK 99709-3844